United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

In cooperation with
United States Department of
Agriculture, Forest Service,
and Washington State
University Agricultural
Research Center

Soil Survey of Cashmere Mountain Area, Washington, Parts of Chelan and Okanogan Counties

How To Use This Soil Survey

General Soil Map

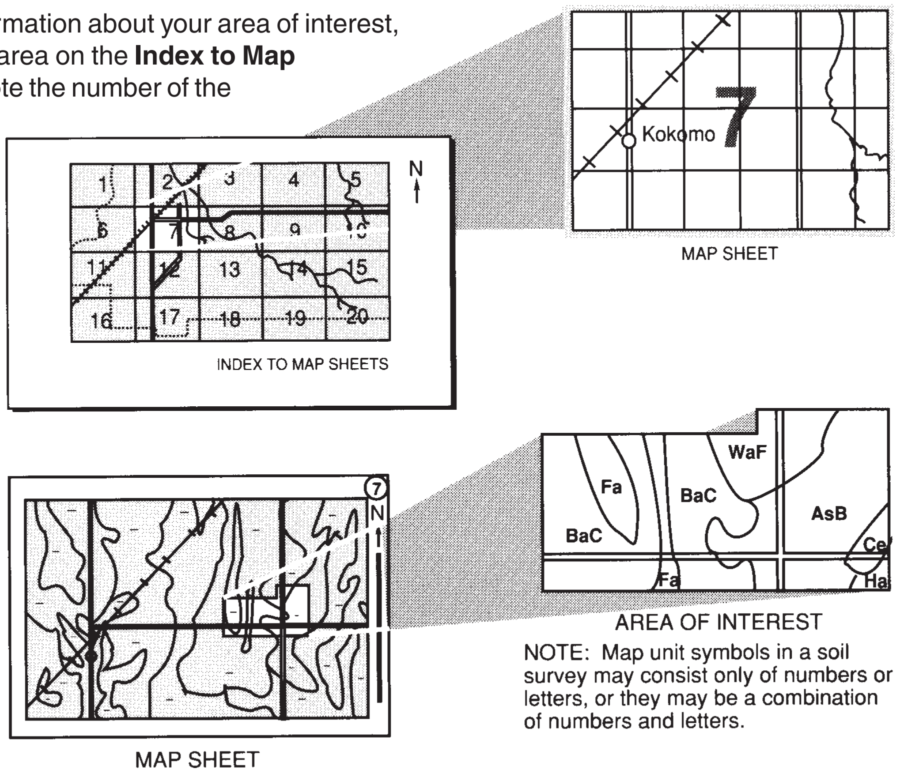
The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.



NOTE: Map unit symbols in a soil survey may consist only of numbers or letters, or they may be a combination of numbers and letters.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1988. Soil names and descriptions were approved in 1989. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1988. This survey was made cooperatively by the Natural Resources Conservation Service and the Forest Service and Washington State University Agricultural Research Center. The survey is part of the technical assistance furnished to the Chelan County Conservation District and Chelan County Commissioners.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

The most current soil information and interpretations for this survey area are available either through the Soil Data Mart or in the Field Office Technical Guide (FOTG) at the local field office of the Natural Resources Conservation Service. The Soil Data Mart is the Natural Resources Conservation Service data storage site for the official soil survey information. The FOTG is linked to the Soil Data Mart; therefore, the same information is available from both sources. Soil survey maps and tabular data can be accessed through the Soil Data Mart at http://soildatamart.nrcs.usda.gov. The official soil survey information stored at the Soil Data Mart and this soil survey report are also available through Web Soil Survey at http://soils.usda.gov/survey.

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Cover: Typical area of Cashmere Mountain Area, Washington. Cashmere Mountain is in background.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

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Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

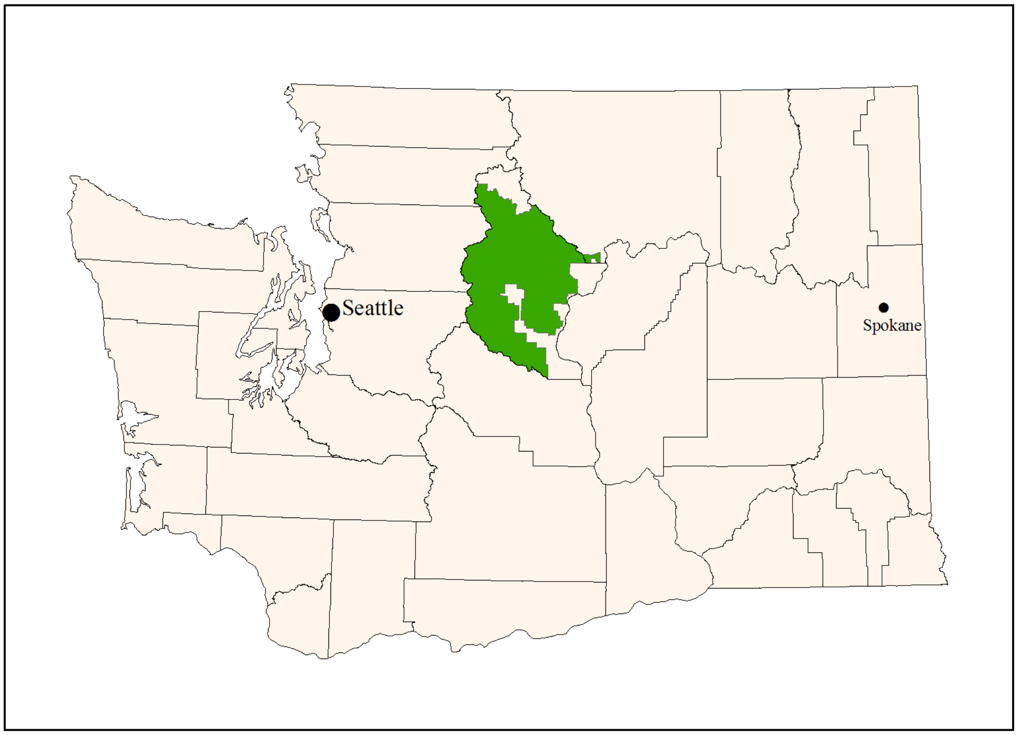
This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Gus Hughbanks
State Conservationist
Natural Resources Conservation Service



Location of Cashmere Mountain Area, Washington, Parts of Chelan and Okanogan Counties.

Soil Survey of Cashmere Mountain Area, Washington, Parts of Chelan and Okanogan Counties

By Terry L. Aho and Vern Beieler, Natural Resources Conservation Service

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United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with United States Department of Agriculture, Forest Service, and Washington State University Agricultural Research Center

CASHMERE MOUNTAIN AREA is in the central part of Washington. It extends from near the Columbia River on the east to the crest of the Cascade Mountains on the west. The survey area is about 2,249 square miles, or 1,532,289 acres, of which 1,518,551 acres are in Chelan County and 13,738 acres are in Okanogan County. Not included in the survey area are 143,234 acres that make up the North Cascades National Park and Lake Chelan Recreational Area; 49,985 acres that consist of bodies of water more than 40 acres in size; and 297,310 acres that are included in the soil survey of Chelan Area, Washington, Parts of Chelan and Kittitas Counties. The Wenatchee National Forest makes up the majority of the survey area, but the area also includes some private land, State land, and other Federal land.

The soil survey of Entiat Area, Washington (USDA, 1968), and the soil resource inventory of the Wenatchee National Forest (USDA, 1976) cover part of this present survey. This survey, however, provides updated and additional information and provides larger maps that show the soil in greater detail.

Climate

Prepared by the National Water and Climate Center, Natural Resources Conservation Service, Portland, Oregon.

The climate tables were created from data recorded at the Leavenworth 3 S, Stehekin 3 NW, Stevens Pass, and Wenatchee, Washington, climate stations. Thunderstorm days, relative humidity, percent sunshine, and wind information are estimated from data collected at the First Order station at Yakima, Washington.

Table 1 gives data on temperature and precipitation for the survey area as recorded at the above-mentioned climate stations in the period 1961 to 1990. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season. For the precipitation and temperature extremes, the period of record used was 1948 to 1998 at Leavenworth, 1931 to 1998 at Stehekin and Wenatchee, and 1951 to 1994 at Stevens Pass.

In winter, the average temperature is 27.9 degrees F at Leavenworth, 30.2 degrees at Stehekin, 25.0 degrees at Stevens Pass, and 31.9 degrees at Wenatchee. The average daily minimum temperature in winter is 19.3 degrees at Leavenworth, 25.0 degrees at Stehekin, 20.1 degrees at Stevens Pass, and 25.2 degrees at

Wenatchee. The lowest temperature on record is -36 degrees at Leavenworth on December 30, 1968; -21 degrees at Stehekin on December 30, 1968; -25 degrees at Stevens Pass on December 31, 1968; and -19 degrees at Wenatchee on December 30, 1968.

In summer, the average temperature is 67.1 degrees at Leavenworth, 66.1 degrees at Stehekin, 53.3 degrees at Stevens Pass, and 71.8 degrees at Wenatchee. The average daily maximum temperature in summer is 85.4 degrees at Leavenworth, 80.6 degrees at Stehekin, 62.7 degrees at Stevens Pass, and 85.7 degrees at Wenatchee. The highest recorded temperature is 108 degrees at Leavenworth on August 16, 1967; 107 degrees at Stehekin on July 28, 1998; 91 degrees at Stevens Pass on June 17, 1961; and 110 degrees at Wenatchee on July 17, 1941.

Growing degree days are shown in table 1. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The precipitation in the survey area varies widely. The survey area is very wet and snowy along the crest of the Cascade Mountains, but it receives less than 10 inches of precipitation in the far eastern areas, near Wenatchee. The mean annual precipitation maps derived from the PRISM modeling system indicate that most of the survey area receives 25 to 50 inches of precipitation annually, except for areas near the crest of the Cascade Mountains, which receive 50 to 150 inches, and areas at the lowest elevations, which receive 8 to 15 inches. The average annual precipitation is 83.14 inches at Stevens Pass, 35.50 inches at Stehekin, 25.54 inches at Leavenworth, and 8.82 inches at Wenatchee. At lower elevations, the growing season typically is May through September. Commonly, only 10 to 20 percent of the average annual precipitation is received during this period.

The heaviest 1-day precipitation during the period of record was 3.60 inches at Leavenworth on January 9, 1990; 6.60 inches at Stehekin on February 16, 1949; 10.94 inches at Stevens Pass on November 12, 1989; and 2.72 inches at Wenatchee on August 18, 1975. Thunderstorms occur on about 7 days each year, and most occur in June through August.

The average annual snowfall also is related to the elevation and location. The heaviest snowfall occurs along the crest of the Cascade Mountains, and it decreases eastward in the survey area. The average annual snowfall is 485.2 inches at Stevens Pass, 130.1 inches at Stehekin, 99.9 inches at Leavenworth, and 27.0 inches at Wenatchee. The greatest snow depth at any one time during the period of record was 93 inches at Leavenworth on February 23, 1969; 93 inches at Stehekin on March 12, 1951; 219 inches at Stevens Pass on March 9, 1956; and 31 inches at Wenatchee on January 9, 1993. On an average, about 212 days per year have at least 1 inch of snow on the ground at Stevens Pass. The average decreases to 111 days per year at Stehekin, 90 days at Leavenworth, and 42 days at Wenatchee. The heaviest 1-day snowfall on record is 28.0 inches at Leavenworth on December 27, 1965; 44.0 inches at Stehekin on January 21, 1935; 45.0 inches at Stevens Pass on January 2, 1965; and 17.7 inches at Wenatchee on December 9, 1971.

The average relative humidity is quite variable across the survey area. Because the survey area lies east of the crest of the Cascade Mountains, most of it is much drier than western Washington. In general, the humidity in midafternoon in winter ranges from about 70 percent in the lowest valleys to 60 percent on the middle slopes. In summer, the humidity in the afternoon typically ranges from 25 percent at the lower elevations to about 40 percent near the crest of the Cascade Mountains. Humidity typically becomes higher at night as temperatures cool, and the average at dawn is about 85 percent in winter and 70 percent in summer. The sun shines about 75 percent of the time possible in summer at the lower elevations and about 60 percent of the time possible near the crest of the Cascade Mountains. In winter, the sun shines about 30 percent of the time possible at the lower elevations and 20 percent at the higher elevations in the western part. The prevailing wind generally is from the south, but it is from the north in winter and from the west or southwest in April. The average windspeed is highest, about 10 miles per hour, in April. The windspeed is greatly affected by the local terrain; windspeed typically is higher at the highest elevations.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

This survey was mapped at two levels of detail. At the more detailed level, the map units are narrowly defined. The map unit boundaries were plotted and verified at closely spaced intervals. At the less detailed level, the map units are broadly defined. The boundaries were plotted and verified at wider intervals. An asterisk following the map unit name indicates that the map unit is broadly defined. The detail of mapping was selected to meet the anticipated long-term use of the survey, and the map units were designed to meet the needs for that use.

General Soil Map Units

The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

Soils on Flood Plains, Alluvial Fans, and Terraces

Number of map units: 1
Percentage of survey area: 1 percent
Slope range: 0 to 60 percent
Native vegetation: Trees, shrubs, and forbs
Elevation: 1,100 to 3,600 feet
Average annual precipitation: 18 to 110 inches
Average annual air temperature: 39 to 45 degrees F
Growing season: 100 to 190 days
Frost-free season: 60 to 150 days
Parent material: Alluvium, and volcanic ash and pumice over glacial outwash
Depth class: Very deep
Drainage class: Somewhat excessively drained to somewhat poorly drained
Major uses: Forestland, hay and pasture, homesites, livestock grazing, wildlife habitat, watershed, and recreation

1. Aeric Fluvaquents-Cryomont-Line

Very deep, somewhat excessively drained to somewhat poorly drained, nearly level to steep soils that formed in alluvium and in volcanic ash and pumice over glacial outwash; on flood plains and alluvial fans

Setting

Location: Central part of the survey area
Slope range: 0 to 60 percent
Elevation: 1,200 to 3,600 feet
Average annual precipitation: 18 to 110 inches
Average annual air temperature: 39 to 45 degrees F

Growing season: 100 to 190 days
Frost-free season: 60 to 150 days

Soil Characteristics

Aeric Fluvaquents
Position on landscape: Flood plains
Parent material: Alluvium
Typical profile:
Surface layer—silt loam
Subsoil—sandy loam
Substratum—sand
Depth class: Very deep
Drainage class: Somewhat poorly drained

Cryomont
Position on landscape: Flood plains and alluvial fans
Parent material: Alluvium
Typical profile:
Surface layer—stony fine sandy loam
Subsoil—very gravelly loamy sand
Substratum—extremely gravelly coarse sand
Depth class: Very deep
Drainage class: Somewhat excessively drained

Line
Position on landscape: Terraces, terrace escarpments, and alluvial fans
Parent material: Volcanic ash and pumice over glacial outwash
Typical profile:
Upper part of subsoil—cindery fine sandy loam
Lower part of subsoil—cindery sandy loam
Upper part of substratum—very gravelly loamy sand
Lower part of substratum—extremely gravelly coarse sand
Depth class: Very deep
Drainage class: Well drained

Soils of Minor Extent

Billyridge, Burnscreek, Cashmont, Kladnick, and Zeb soils on terraces and fans; Chiwawa soils on terraces; and Angle and Spodic Vitrixerands on terraces and terrace escarpments

Major Uses

Forestland, wildlife habitat, watershed, and recreation

Soils on Foothills and Mountains at Low Elevations

Number of map units: 4
Percentage of survey area: 10 percent
Slope range: 0 to 90 percent
Native vegetation: Trees, grasses, shrubs, and forbs
Elevation: 1,000 to 4,800 feet
Average annual precipitation: 9 to 28 inches
Average annual air temperature: 45 to 50 degrees F

Growing season: 140 to 210 days
Frost-free season: 100 to 185 days
Parent material: Residuum and colluvium derived from sandstone, schist, and granitic rock mixed with loess and volcanic ash in the upper part, and volcanic ash and pumice over bedrock or glacial till
Depth class: Shallow to very deep
Drainage class: Well drained
Major uses: Irrigated orchards, hay and pasture, cropland, and homesites below an elevation of 2,000 feet, livestock grazing, forestland, wildlife habitat, watershed, and recreation

2. Borland-Bjork-Cowiche

Shallow to very deep, well drained, nearly level to very steep soils that formed in residuum and colluvium derived from sandstone and schist mixed with loess in the upper part; on foothills and low-elevation mountains

Setting

Location: Mainly on Tibbetts and Blag Mountains, in the southeastern part of the survey area
Slope range: 3 to 90 percent
Elevation: 1,000 to 4,800 feet
Average annual precipitation: 9 to 18 inches
Average annual air temperature: 47 to 50 degrees F
Frost-free season: 130 to 185 days

Soil Characteristics

Borland
Position on landscape: Mountains
Parent material: Residuum and colluvium derived from sandstone mixed with loess
Typical profile:
Surface layer—loam
Subsoil—clay loam
Underlying material—unweathered bedrock
Depth class: Shallow
Drainage class: Well drained

Bjork
Position on landscape: Foothills and mountains
Parent material: Loess mixed with residuum and colluvium derived from schist, sandstone, and conglomerate
Typical profile:
Surface layer—loam
Subsoil—clay loam
Underlying material—weathered bedrock
Depth class: Moderately deep
Drainage class: Well drained

Cowiche
Position on landscape: Foothills
Parent material: Loess over residuum derived from sandstone and schist
Typical profile:
Upper part of surface layer—silt loam

Lower part of surface layer—loam
Upper part of subsoil—loam
Lower part of subsoil—clay loam
Underlying material—weathered bedrock

Depth class: Deep and very deep
Drainage class: Well drained

Soils of Minor Extent

Hyprairie, Oldbutte, Taneum, Tronsen, and Yaxon soils on mountains and foothills

Major Uses

Livestock grazing, wildlife habitat, watershed, and recreation

3. Varelum-Yaxing

Deep and very deep, well drained, nearly level to very steep soils that formed in residuum and colluvium derived from sandstone mixed with loess in the upper part; on foothills

Setting

Location: Along the south side of the Wenatchee Valley
Slope range: 3 to 60 percent
Elevation: 1,000 to 3,200 feet
Average annual precipitation: 16 to 28 inches
Average annual air temperature: 45 to 48 degrees F
Growing season: 150 to 210 days
Frost-free season: 110 to 185 days

Soil Characteristics

Varelum
Position on landscape: Foothills
Parent material: Residuum and colluvium derived from sandstone mixed with loess and volcanic ash
Typical profile:
Surface layer—loam
Subsoil—clay loam
Underlying material—weathered bedrock
Depth class: Deep
Drainage class: Well drained

Yaxing
Position on landscape: Foothills
Parent material: Residuum and colluvium derived from sandstone mixed with loess in the upper part
Typical profile:
Surface layer—loam
Subsoil—loam
Substratum—loam
Depth class: Very deep
Drainage class: Well drained

Soils of Minor Extent

Nard and Yaxon soils on mountains and foothills

Major Uses

Irrigated orchards below an elevation of 2,000 feet, hay and pasture, forestland, livestock grazing, homesites, wildlife habitat, watershed, and recreation

4. Mansonia-Morical

Moderately deep to very deep, well drained, nearly level to very steep soils that formed in volcanic ash and pumice over granodiorite or glacial till and residuum and colluvium derived from granitic rock mixed with loess and volcanic ash in the upper part; on foothills and mountains

Setting

Location: Near Ardenvoir and along the north shore of Lake Chelan
Slope range: 3 to 90 percent
Elevation: 1,100 to 3,200 feet
Average annual precipitation: 12 to 18 inches
Average annual air temperature: 45 to 49 degrees F
Frost-free season: 100 to 160 days

Soil Characteristics

Mansonia
Position on landscape: Foothills
Parent material: Volcanic ash and pumice over granodiorite or glacial till
Typical profile:
  Surface layer—cindery fine sandy loam
  Subsoil—cindery sandy loam
  Substratum—cindery sandy loam
  Underlying material—unweathered bedrock
Depth class: Deep and very deep
Drainage class: Well drained

Morical
Position on landscape: Mountains and foothills
Parent material: Residuum and colluvium derived from granitic rock mixed with volcanic ash and loess in the upper part
Typical profile:
  Surface layer—fine sandy loam
  Upper part of subsoil—sandy loam
  Lower part of subsoil—sandy clay loam
  Underlying material—weathered bedrock
Depth class: Moderately deep
Drainage class: Well drained

Soils of Minor Extent

Dinkels, Entiat, and Tronsen soils on mountains

Major Uses

Livestock grazing, cropland, hay and pasture, wildlife habitat, watershed, and recreation

5. Thowson-Safety

Moderately deep and very deep, well drained, nearly level to very steep soils that formed in volcanic ash and pumice over glacial till and residuum and colluvium derived from granitic rock mixed with loess and volcanic ash in the upper part; on lower elevation mountains

Setting

Location: Near Ardenvoir and along the north shore of Lake Chelan
Slope range: 0 to 90 percent
Elevation: 1,100 to 3,800 feet
Average annual precipitation: 15 to 25 inches
Average annual air temperature: 46 to 50 degrees F
Growing season: 140 to 210 days
Frost-free season: 100 to 170 days

Soil Characteristics

Thowson
Position on landscape: Mountains
Parent material: Volcanic ash and pumice over glacial till
Typical profile:
Surface layer—fine sandy loam
Subsoil—cindery fine sandy loam
Substratum—very cobbly loamy sand
Depth class: Very deep
Drainage class: Well drained

Safety
Position on landscape: Mountains
Parent material: Residuum and colluvium derived from granitic rock mixed with volcanic ash and loess
Typical profile:
Upper part of surface layer—stony sandy loam
Lower part of surface layer—sandy loam
Subsoil—sandy loam
Underlying material—weathered bedrock
Depth class: Moderately deep
Drainage class: Well drained

Soils of Minor Extent

Ardening, Dinkelman, Dragoon, Georgecreek, Shamel, and Switchback soils on mountains

Major Uses

Irrigated orchards below an elevation of 2,000 feet, hay and pasture, forestland, livestock grazing, wildlife habitat, watershed, and recreation

Soils on Mountains at Middle Elevations

Number of map units: 4
Percentage of survey area: 39 percent
Slope range: 3 to 90 percent
Native vegetation: Trees, grasses, shrubs, and forbs
Elevation: 1,000 to 5,900 feet
Average annual precipitation: 13 to 65 inches
Average annual air temperature: 39 to 49 degrees F
Growing season: 120 to 220 days
Frost-free season: 80 to 185 days
Parent material: Residuum and colluvium derived from sandstone, granite, gneiss, schist, and granodiorite mixed with volcanic ash and loess in the upper part; volcanic ash and pumice over glacial till; and volcanic ash and pumice
Depth class: Shallow to very deep
Drainage class: Well drained
Major uses: Forestland, livestock grazing, wildlife habitat, watershed, and recreation

6. Swakane-Tyee

Shallow, well drained, moderately steep to very steep soils that formed in residuum and colluvium derived from granite, gneiss, schist, and granodiorite mixed with volcanic ash and loess; on mountains

Location: Along the eastern border of the survey area
Slope range: 3 to 90 percent
Elevation: 1,100 to 3,600 feet
Average annual precipitation: 13 to 18 inches
Average annual air temperature: 46 to 49 degrees F
Frost-free season: 130 to 160 days

Soil Characteristics

Swakane
Position on landscape: Mountains
Parent material: Colluvium and residuum derived from gneiss, schist, and granodiorite mixed with volcanic ash and loess
Typical profile:
Upper part of surface layer—stony sandy loam
Lower part of surface layer—very gravelly coarse sandy loam
Substratum—very gravelly sandy loam
Underlying material—unweathered bedrock
Depth class: Shallow
Drainage class: Well drained

Tyee
Position on landscape: Mountains
Parent material: Residuum and colluvium derived from granitic rock with minor amounts of loess and volcanic ash

Typical profile:
Surface layer—gravelly sandy loam
Substratum—gravelly coarse sandy loam
Underlying material—weathered bedrock
Depth class: Shallow
Drainage class: Well drained

Soils of Minor Extent

Ardening, Dinkels, Dinkelman, Entiat, and Safety soils on mountains

Major Uses

Livestock grazing, wildlife habitat, watershed, and recreation

7. Nard-Scotties-Cle Elum

Moderately deep to very deep, well drained, nearly level to very steep soils that formed in residuum and colluvium derived from sandstone mixed with loess and volcanic ash in the upper part; on mountains

Setting

Location: Mainly in the southeastern part of the survey area and the upper Wenatchee Valley to Lake Wenatchee
Slope range: 3 to 75 percent
Elevation: 1,000 to 4,800 feet
Average annual precipitation: 18 to 40 inches
Average annual air temperature: 41 to 47 degrees F
Growing season: 140 to 220 days
Frost-free season: 90 to 185 days

Soil Characteristics

Nard
Position on landscape: Mountains
Parent material: Residuum and colluvium derived from sandstone mixed with volcanic ash and loess
Typical profile:
Surface layer—sandy loam
Upper part of subsoil—sandy loam
Lower part of subsoil—loam
Depth class: Very deep
Drainage class: Well drained

Scotties
Position on landscape: Mountains
Parent material: Colluvium and residuum derived from sandstone with a thin mantle of volcanic ash
Typical profile:
Upper part of subsoil—gravelly loam
Lower part of subsoil—gravelly loam
Substratum—very gravelly loam and extremely cobbly sandy loam
Underlying material—unweathered bedrock
Depth class: Deep
Drainage class: Well drained

Cle Elum
Position on landscape: Mountains
Parent material: Residuum and colluvium derived from sandstone mixed with minor amounts of volcanic ash and loess
Typical profile:
Surface layer—loam
Subsoil—loam and clay loam
Underlying material—weathered bedrock
Depth class: Moderately deep
Drainage class: Well drained

Soils of Minor Extent

Blewett, Blag, Shaser, Natapoc, and Inkler soils on mountains and Varelum soils on foothills

Major Uses

Forestland, livestock grazing, wildlife habitat, watershed, and recreation

8. Saska-Choralmont-Ramparter

Very deep, well drained, nearly level to very steep soils that formed in volcanic ash and pumice over glacial till and in volcanic ash and pumice; mainly on mountains

Setting

Location: Mainly in the Entiat and Chiwawa River Valleys
Slope range: 3 to 90 percent
Elevation: 2,000 to 5,900 feet
Average annual precipitation: 30 to 65 inches
Average annual air temperature: 39 to 45 degrees F
Growing season: 120 to 170 days
Frost-free season: 80 to 130 days

Soil Characteristics

Saska
Position on landscape: Mountains, terraces, and terrace escarpments
Parent material: Volcanic ash and pumice over glacial till
Typical profile:
Surface layer—stony sandy loam when mixed
Subsoil—sandy loam
Substratum—very stony sandy loam
Depth class: Very deep
Drainage class: Well drained

Choralmont
Position on landscape: Mountains
Parent material: Volcanic ash and pumice over glacial till, and volcanic ash and pumice
Typical profile:
Surface layer—cindery sandy loam when mixed
Upper part of subsoil—very cindery sandy loam
Lower part of subsoil—very cindery loamy sand
Upper part of substratum—cinders
Lower part of substratum—fine sandy loam and loamy sand

Depth class: Very deep
Drainage class: Well drained

Ramparter
Position on landscape: Mountains
Parent material: Volcanic ash and pumice over glacial till
Typical profile:
  Surface layer—cindery very fine sandy loam when mixed
  Upper part of subsoil—very cindery sandy loam and fine sandy loam
  Middle part of subsoil—cinders and sand
  Lower part of subsoil—sandy loam
Depth class: Very deep
Drainage class: Well drained

Soils of Minor Extent

Bisping, McCree, Palmont, Palmich, Thow, and Tillmont soils on mountains

Major Uses

Forestland, livestock grazing, wildlife habitat, watershed, and recreation

9. McCree-Ardenmont

Deep, well drained, gently sloping to very steep soils that formed in colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice and in residuum and colluvium derived from schist mixed with volcanic ash and loess in the upper part; on mountains

Setting

Location: South and west of Leavenworth, south of Ardenvoir, and along the north and south shores of Lake Chelan
Slope range: 8 to 90 percent
Elevation: 2,200 to 5,300 feet
Average annual precipitation: 18 to 30 inches
Average annual air temperature: 42 to 45 degrees F
Growing season: 120 to 175 days
Frost-free season: 80 to 120 days

Soil Characteristics

McCree
Position on landscape: Mountains with a southerly aspect
Parent material: Colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice
Typical profile:
  Surface layer—stony fine sandy loam when mixed
  Subsoil—very stony fine sandy loam
  Substratum—extremely stony sandy loam
  Underlying material—unweathered bedrock
Depth class: Deep
Drainage class: Well drained

Ardenmont
Position on landscape: Mountains with a northerly aspect
Parent material: Residuum and colluvium derived from schist mixed with volcanic ash and loess

Typical profile:
Surface layer—coarse sandy loam
Upper part of subsoil—gravelly coarse sandy loam and coarse sandy loam
Lower part of subsoil—gravelly sandy loam
Underlying material—weathered bedrock
Depth class: Deep
Drainage class: Well drained

Soils of Minor Extent

Macreeing, Wilma, Ardenvoir, Icicle, Loneridge, Chapot, Stemilt, Switchback, Kingmont, Kloochman, and Mountaineer soils on mountains

Major Uses

Forestland, livestock grazing, wildlife habitat, watershed, and recreation

Soils in Valleys and on Mountains at High Elevations

Number of map units: 4
Percentage of survey area: 48 percent
Slope range: 0 to 120 percent
Native vegetation: Trees, grasses, shrubs, and forbs
Elevation: 2,500 to 8,250 feet
Average annual precipitation: 35 to 150 inches
Average annual air temperature: 35 to 43 degrees F
Growing season: 60 to 150 days
Frost-free season: 30 to 110 days
Parent material: Volcanic ash and loess mixed with residuum and colluvium derived from metamorphic and igneous rock; volcanic ash and pumice over glacial till; glacial till with an admixture of volcanic ash; and volcanic ash and pumice
Depth class: Moderately deep to very deep
Drainage class: Well drained
Major uses: Forestland, livestock grazing, wildlife habitat, watershed, and recreation

10. Andic Cryumbrepts-Haplocryods-Rock outcrop

Moderately deep to very deep, well drained, moderately steep to very steep soils that formed in volcanic ash and loess mixed with residuum and colluvium derived from metamorphic and igneous rock, and Rock outcrop; on high-elevation mountains

Setting

Location: Western part of the survey area
Slope range: 3 to 90 percent
Elevation: 2,500 to 8,250 feet
Average annual precipitation: 35 to 150 inches
Average annual air temperature: 35 to 42 degrees F
Growing season: 60 to 130 days
Frost-free season: 30 to 90 days

Soil Characteristics

Andic Cryumbrepts
Position on landscape: Mountains with a southerly aspect
Parent material: Volcanic ash and loess mixed with residuum and colluvium derived from metamorphic and igneous rock
Typical profile:
Surface layer—stony sandy loam
Subsurface layer—gravelly sandy loam
Subsoil—gravelly and very gravelly sandy loam
Substratum—very gravelly and extremely gravelly sandy loam
Underlying material—bedrock
Depth class: Moderately deep to very deep
Drainage class: Well drained

Haplocryods
Position on landscape: Mountains
Parent material: Volcanic ash mixed with glacial till or colluvium and residuum derived from metamorphic and igneous rock
Typical profile:
Surface layer—loam when mixed
Subsoil—gravelly sandy loam and very gravelly sandy loam
Substratum—very gravelly sandy loam
Depth class: Moderately deep to very deep
Drainage class: Well drained

Soils of Minor Extent

Alnult, Reggad, and Treen soils and Andic Cryochrepts on mountains

Major Uses

Livestock grazing, forestland, wildlife habitat, watershed, and recreation

11. Chiwaukum-Vabus

Very deep and moderately deep, well drained and moderately well drained, nearly level to very steep soils that formed in volcanic ash and pumice over glacial till and in glacial till with an admixture of volcanic ash; on high-elevation mountains and in valleys

Setting

Location: Western part of the survey area
Slope range: 3 to 60 percent
Elevation: 2,500 to 5,500 feet
Average annual precipitation: 50 to 90 inches
Average annual air temperature: 39 to 43 degrees F
Growing season: 100 to 150 days
Frost-free season: 60 to 110 days

Soil Characteristics

Chiwaukum
Position on landscape: Valleys and mountains
Parent material: Volcanic ash and pumice over glacial till

Typical profile:
Surface layer—bouldery fine sandy loam
Upper part of subsoil—gravelly sandy loam
Lower part of subsoil—cobbly sandy loam
Substratum—extremely stony coarse sandy loam
Depth class: Very deep
Drainage class: Well drained

Vabus
Position on landscape: Valleys and mountains
Parent material: Glacial till with an admixture of volcanic ash
Typical profile:
Surface layer—gravelly fine sandy loam when mixed
Subsoil—very gravelly sandy loam
Substratum—dense glacial till
Depth class: Moderately deep to glacial till
Drainage class: Moderately well drained

Soils of Minor Extent

Soda, Vabbing, Altapeak, Alnult, and Reggad soils on mountains and Chinkmin soils in valleys

Major Uses

Forestland, wildlife habitat, watershed, and recreation

12. Fears-Humicryods

Moderately deep to very deep, well drained, nearly level to very steep soils that formed in volcanic ash mixed with colluvium derived from many kinds of rock and in volcanic ash and pumice mixed with colluvium derived from granitic rock; on high-elevation mountains

Setting

Location: Western and northern parts of the survey area
Slope range: 3 to 120 percent
Elevation: 4,000 to 8,000
Average annual precipitation: 35 to 130 inches
Average annual air temperature: 38 to 43 degrees F
Growing season: 90 to 130 days
Frost-free season: 50 to 90 days

Soil Characteristics

Fears
Position on landscape: Mountains
Parent material: Volcanic ash and pumice mixed with colluvium derived from granitic rock
Typical profile:
Surface layer—stony fine sandy loam
Upper part of subsoil—cobbly fine sandy loam
Lower part of subsoil—very cobbly fine sandy loam
Substratum—extremely gravelly coarse sandy loam and extremely gravelly sandy loam

Depth class: Very deep
Drainage class: Well drained

Humicryods
Position on landscape: Mountains
Parent material: Volcanic ash mixed with colluvium derived from many kinds of rock
Typical profile:
Surface layer—bouldery loamy sand
Upper part of subsoil—fine sandy loam
Lower part of subsoil—very cobbly sandy loam
Substratum—very cobbly loamy coarse sand
Underlying material—weathered bedrock
Depth class: Moderately deep to very deep
Drainage class: Well drained

Soils of Minor Extent

Devore, Almac, Altapeak, Azwell, Gilpar, Esmeralda, Goffpeak, Serene, Skipeak, Surgh, and Wedgemont soils on mountains

Major Uses

Forestland, wildlife habitat, watershed, and recreation

13. Wedge-Fernow

Very deep, well drained, nearly level to very steep soils that formed in volcanic ash and pumice; on high-elevation mountains and in valleys

Setting

Location: Northwestern part of the survey area
Slope range: 0 to 60 percent
Elevation: 2,500 to 6,000 feet
Average annual precipitation: 35 to 100 inches
Average annual air temperature: 37 to 42 degrees F
Growing season: 90 to 130 days
Frost-free season: 55 to 90 days

Soil Characteristics

Wedge
Position on landscape: Mountains
Parent material: Volcanic ash and pumice
Typical profile:
Surface layer—cindery sandy loam when mixed
Upper part of subsoil—cindery sandy loam
Lower part of subsoil—very cindery sandy loam and extremely cindery loamy sand
Substratum—cinders
Depth class: Very deep
Drainage class: Well drained

Fernow
Position on landscape: Mountains and glaciated valleys
Parent material: Volcanic ash and pumice
Typical profile:
Surface layer—loam when mixed
Subsoil—loam

Upper part of substratum—very cindery loam
Middle part of substratum—extremely cindery sandy loam
Lower part of substratum—cinders

Depth class: Very deep
Drainage class: Well drained

Components of Minor Extent

Totem, Wedgemont, Serene, and Isella soils and Rock outcrop on mountains

Major Uses

Forestland, wildlife habitat, watershed, and recreation

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Nard sandy loam, 3 to 30 percent slopes, is a phase of the Nard series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or associations.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alnult-Reggad complex, 45 to 90 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Fernow-Serene association, 30 to 60 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop-Rubble land-Glaciers, snowfields complex is an example.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

This survey was mapped at two levels of detail. At the more detailed level, the map units are narrowly defined. The map unit boundaries were plotted and verified at closely spaced intervals. At the less detailed level, the map units are broadly defined. The boundaries were plotted and verified at wider intervals. An asterisk following the map unit name indicates that the map unit is broadly defined. The detail of mapping was selected to meet the anticipated long-term use of the survey, and the map units were designed to meet the needs for that use.

1—Aeric Fluvaquents, nearly level*

Composition

Aeric Fluvaquents and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Flood plains
Parent material: Alluvium mixed with volcanic ash
Slope range: 0 to 2 percent
Elevation: 1,500 to 3,500 feet
Average annual precipitation: 22 to 65 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days

Soil Properties

Reference profile:
0 to 8 inches—dark gray silt loam (surface layer)
8 to 27 inches—light brownish gray and grayish brown, mottled silt loam (subsoil)
27 to 36 inches—light brownish gray, mottled sandy loam (upper part of substratum)

36 to 44 inches—gray, mottled sand (middle part of substratum)
44 to 60 inches—multicolored, mottled gravelly sand (lower part of substratum)

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Available water capacity: High
Seasonal high water table: Present in January through December with its highest level (0.7 to 1.3 feet) in March through April
Frequency of flooding: Occasional, brief periods in February through May

Contrasting Inclusions

- Soils that have pumice in the upper 30 inches of the profile (Bigcreek)
- Soils that are extremely cobbly sand between depths of 21 and 60 inches (Kladnick)
- Soils that are well drained (Nard)
- Soils that are very stony sandy loam between depths of 16 and 60 inches (Saska)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Stable

2—Almac fine sandy loam, 3 to 30 percent slopes

Composition

Almac and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash over residuum and colluvium derived from schist and gneiss
Slope range: 3 to 30 percent
Elevation: 3,200 to 6,000 feet
Average annual precipitation: 35 to 45 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 38 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 100 days

Soil Properties

Typical profile:
Organic mat on surface—2.5 inches thick
0 to 3 inches—light yellowish brown and yellowish brown fine sandy loam (upper part of subsoil)
3 to 23 inches—yellowish brown and light yellowish brown fine sandy loam and sandy loam (middle part of subsoil)
23 to 50 inches—light yellowish brown and brown loam and gravelly loam (lower part of subsoil)

50 to 63 inches—light yellowish brown and dark brown gravelly fine sandy loam (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 23 inches and moderately rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that are very gravelly sandy loam between depths of 13 and 46 inches (Surgh)
- Soils that have bedrock at a depth of 20 to 40 inches (Azwell)
- Soils that have a dark surface layer and have bedrock at a depth of 20 to 40 inches (Bagmont)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

3—Almac fine sandy loam, 30 to 60 percent slopes

Composition

Almac and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash over colluvium derived from schist and gneiss
Slope range: 30 to 60 percent
Elevation: 3,200 to 6,000 feet
Average annual precipitation: 35 to 45 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 38 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 100 days

Soil Properties

Typical profile:
Organic mat on surface—2.5 inches thick
0 to 3 inches—light yellowish brown and yellowish brown fine sandy loam (upper part of subsoil)
3 to 23 inches—yellowish brown and light yellowish brown fine sandy loam and sandy loam (middle part of subsoil)
23 to 50 inches—light yellowish brown and brown loam and gravelly loam (lower part of subsoil)
50 to 63 inches—light yellowish brown and dark brown gravelly fine sandy loam (substratum)

Depth class: Very deep

Drainage class: Well drained
Permeability: Moderate in the upper 23 inches and moderately rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Azwell)
- Soils that are very gravelly sandy loam between depths of 13 and 46 inches (Surgh)
- Soils that have a dark surface layer and have bedrock at a depth of 20 to 40 inches (Bagmont)
- Soils that have an extremely stony coarse sandy loam substratum (Chiwaukum)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

4—Almac fine sandy loam, moist, 30 to 60 percent slopes

Composition

Almac and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash over colluvium derived from schist and gneiss
Slope range: 30 to 60 percent
Elevation: 4,000 to 6,000 feet
Average annual precipitation: 45 to 55 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—2.5 inches thick
0 to 3 inches—light yellowish brown and yellowish brown fine sandy loam (upper part of subsoil)
3 to 23 inches—yellowish brown and light yellowish brown fine sandy loam and sandy loam (middle part of subsoil)
23 to 50 inches—light yellowish brown and brown loam and gravelly loam (lower part of subsoil)
50 to 63 inches—light yellowish brown and dark brown gravelly fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained

Permeability: Moderate in the upper 23 inches and moderately rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Azwell)
- Soils that are very gravelly sandy loam between depths of 13 and 46 inches (Surgh)
- Soils that have an extremely stony coarse sandy loam substratum (Chiwaukum)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

5—Almac-Azwell association, 30 to 60 percent slopes*

Composition

Almac and similar soils—40 percent
Azwell and similar soils—30 percent
Contrasting inclusions—30 percent

Map Unit Characteristics

Position on landscape: Almac—mountainsides that generally have a northerly aspect; Azwell—backslopes, of mountains, that generally have a southerly aspect
Parent material: Almac—volcanic ash over colluvium derived from schist and gneiss; Azwell—residuum and colluvium derived from gneiss and schist mixed with volcanic ash
Slope range: 30 to 60 percent
Elevation: 4,000 to 6,000 feet
Average annual precipitation: Almac—45 to 55 inches; Azwell—30 to 50 inches
Snowpack: Almac—more than 3 feet in December through March; Azwell—more than 3 feet in November through April
Average annual air temperature: Almac—38 to 40 degrees F (cryic); Azwell—40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Azwell—stones cover 1 to 3 percent

Soil Properties

Typical profile of Almac:
Organic mat on surface—1 inch thick
0 to 8 inches—brown fine sandy loam (upper part of subsoil)
8 to 27 inches—pale brown sandy loam (lower part of subsoil)
27 to 60 inches—gray very gravelly sandy loam (substratum)
Typical profile of Azwell:
Organic mat on surface—0.25 inch thick
0 to 4 inches—dark grayish brown stony loam (surface layer)
4 to 15 inches—dark grayish brown cobbly loam (subsoil)

15 to 26 inches—dark grayish brown very stony fine sandy loam (substratum)
26 to 30 inches—fractured unweathered gneiss

Depth class: Almac—very deep; Azwell—moderately deep
Drainage class: Well drained
Permeability: Almac—moderate in the upper 27 inches and moderately rapid below this depth; Azwell—moderate
Available water capacity: Almac—high; Azwell—low

Contrasting Inclusions

- Soils that have an extremely stony coarse sandy loam substratum (Chiwaukum)
- Soils that are very gravelly sandy loam between depths of 13 and 46 inches (Surgh)
- Soils that have an extremely cindery sandy loam subsoil (Wedgemont)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Rock outcrop
- Rubble land

Operability Considerations

Almac
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

Azwell
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

6—Almac-Azwell-Rock outcrop association, 45 to 90 percent slopes*

Composition

Almac and similar soils—35 percent
Azwell and similar soils—25 percent
Rock outcrop—15 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Almac—mountainsides that generally have a northerly aspect; Azwell—backslopes, of mountains, that generally have a southerly aspect
Parent material: Almac—volcanic ash over colluvium derived from schist and gneiss; Azwell—residuum and colluvium derived from gneiss and schist mixed with volcanic ash
Slope range: 45 to 90 percent
Elevation: 4,000 to 6,000 feet

Average annual precipitation: Almac—35 to 50 inches; Azwell—30 to 50 inches
Snowpack: Almac—more than 3 feet in December through March; Azwell—more than 3 feet in November through April
Average annual air temperature: Almac—38 to 40 degrees F (cryic); Azwell—40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Azwell—stones cover 1 to 3 percent

Soil Properties

Typical profile of Almac:
  Organic mat on surface—1 inch thick
  0 to 8 inches—brown fine sandy loam (upper part of subsoil)
  8 to 27 inches—pale brown sandy loam (lower part of subsoil)
  27 to 60 inches—gray very gravelly sandy loam (substratum)
Typical profile of Azwell:
  Organic mat on surface—0.25 inch thick
  0 to 4 inches—dark grayish brown stony loam (surface layer)
  4 to 15 inches—dark grayish brown cobbly loam (subsoil)
  15 to 26 inches—dark grayish brown very stony fine sandy loam (substratum)
  26 to 30 inches—fractured unweathered gneiss
Depth class: Almac—very deep; Azwell—moderately deep
Drainage class: Well drained
Permeability: Almac—moderate in the upper 27 inches and moderately rapid below this depth; Azwell—moderate
Available water capacity: Almac—high; Azwell—low

Rock Outcrop

Kind of rock: Schist or gneiss

Contrasting Inclusions

- Soils that have an extremely stony coarse sandy loam substratum (Chiwaukum)
- Soils that are very gravelly sandy loam between depths of 13 and 46 inches (Surgh)
- Soils that have an extremely cindery sandy loam subsoil (Wedgemont)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)

Operability Considerations

Almac
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

Azwell
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

7—Almac-Rock outcrop complex, 45 to 90 percent slopes

Composition

Almac, moist, and similar soils—55 percent
Rock outcrop—25 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash over colluvium derived from schist and gneiss
Slope range: 45 to 90 percent
Elevation: 4,000 to 6,000 feet
Average annual precipitation: 35 to 55 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile of Almac:
Organic mat on surface—1 inch thick
0 to 8 inches—brown fine sandy loam (upper part of subsoil)
8 to 27 inches—pale brown sandy loam (lower part of subsoil)
27 to 60 inches—gray very gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 27 inches and moderately rapid below this depth
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Schist or gneiss

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Azwell)
- Soils that have an extremely stony coarse sandy loam substratum (Chiwaukum)
- Soils that are very gravelly sandy loam between depths of 13 and 46 inches (Surgh)

Operability Considerations

Almac
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

8—Alnult-Reggad complex, 45 to 90 percent slopes

Composition

Alnult and similar soils—70 percent
Reggad and similar soils—15 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Alnult—slightly convex areas on backslopes, of mountains, that generally have a southerly exposure; Reggad—level areas on backslopes, of mountains, that generally have a southerly exposure
Parent material: Alnult—colluvium derived from granitic rock mixed with volcanic ash; Reggad—admixture of volcanic ash, organic matter, and pumice over rock rubble
Slope range: 45 to 90 percent
Elevation: 3,500 to 5,000 feet
Average annual precipitation: 70 to 85 inches
Average annual air temperature: Alnult—39 to 41 degrees F (cryic); Reggad—38 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Alnult—stones and boulders cover 5 to 12 percent; Reggad—stones and boulders cover 15 to 25 percent

Soil Properties

Typical profile of Alnult:
0 to 6 inches—dark gray very stony fine sandy loam (surface layer)
6 to 32 inches—dark reddish brown very stony fine sandy loam (upper part of subsoil)
32 to 50 inches—brown very gravelly fine sandy loam (lower part of subsoil)
50 to 60 inches—reddish brown extremely gravelly fine sandy loam (substratum)
Typical profile of Reggad:
Organic mat on surface—1 inch thick
0 to 9 inches—very dark gray and very dark grayish brown extremely stony sapric material (surface layer)
9 to 60 inches—angular rock fragments
Depth class: Very deep
Drainage class: Alnult—well drained; Reggad—excessively drained
Permeability: Alnult—moderate; Reggad—very rapid
Available water capacity: Alnult—moderately high; Reggad—low

Contrasting Inclusions

- Rubble land
- Rock outcrop
- Soils that average 0 to 10 percent rock fragments to a depth of 45 inches (Isella)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

9—Altapeak gravelly sandy loam, 3 to 30 percent slopes

Composition

Altapeak and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Broad ridgetops and backslopes of mountains
Parent material: Volcanic ash mixed with colluvium derived from granodiorite
Slope range: 3 to 30 percent
Elevation: 3,200 to 4,400 feet
Average annual precipitation: 70 to 95 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 50 to 80 days

Soil Properties

Typical profile:
  Organic mat on surface—4 inches thick
  0 to 13 inches—dark brown and strong brown gravelly sandy loam (upper part of subsoil when mixed)
  13 to 29 inches—light brown very stony loamy sand (lower part of subsoil)
  29 to 54 inches—very pale brown extremely stony loamy sand (substratum)
  54 to 64 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 13 inches and rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Chinkmin)
- Soils that have a sandy loam substratum (Nimue)
- Soils that consist of angular rock fragments (Reggad)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

10—Altapeak gravelly sandy loam, 30 to 60 percent slopes

Composition

Altapeak and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash mixed with colluvium derived from granodiorite
Slope range: 30 to 60 percent
Elevation: 3,200 to 5,500 feet

Average annual precipitation: 70 to 95 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 50 to 80 days

Soil Properties

Typical profile:
Organic mat on surface—4 inches thick
0 to 13 inches—dark brown and strong brown gravelly sandy loam (upper part of subsoil when mixed)
13 to 29 inches—light brown very stony loamy sand (lower part of subsoil)
29 to 54 inches—very pale brown extremely stony loamy sand (substratum)
54 to 64 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 13 inches and rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Chinkmin)
- Soils that have a sandy loam substratum (Nimue)
- Soils that consist of angular rock fragments (Reggad)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

11—Altapeak gravelly sandy loam, 60 to 90 percent slopes

Composition

Altapeak and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash mixed with colluvium derived from granodiorite
Slope range: 60 to 90 percent
Elevation: 4,000 to 5,500 feet
Average annual precipitation: 70 to 95 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 50 to 80 days

Soil Properties

Typical profile:
Organic mat on surface—4 inches thick
0 to 13 inches—dark brown and strong brown gravelly sandy loam (upper part of subsoil when mixed)
13 to 29 inches—light brown very stony loamy sand (lower part of subsoil)
29 to 54 inches—very pale brown extremely stony loamy sand (substratum)
54 to 64 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 13 inches and rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Chinkmin)
- Soils that consist of volcanic ash (Isella)
- Soils that consist of angular rock fragments (Reggad)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

12—Altapeak gravelly sandy loam, warm, 30 to 60 percent slopes

Composition

Altapeak and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash mixed with colluvium derived from granodiorite
Slope range: 30 to 60 percent
Elevation: 3,200 to 5,400 feet
Average annual precipitation: 95 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—4 inches thick
0 to 6 inches—brown and dark brown gravelly sandy loam (surface layer when mixed)

6 to 26 inches—brown very gravelly loamy sand (subsoil)
26 to 48 inches—yellowish brown and light olive brown very cobbly loamy sand (substratum)
48 to 58 inches—weathered granodiorite

Depth class: Deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 26 inches and rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have a sandy loam subsoil and substratum (Chiwaukum)
- Soils that consist of angular rock fragments (Reggad)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

13—Altapeak-Alnult association, 30 to 60 percent slopes*

Composition

Altapeak and similar soils—40 percent
Alnult and similar soils—30 percent
Contrasting inclusions—30 percent

Map Unit Characteristics

Position on landscape: Altapeak—backslopes of mountains; Alnult—slightly convex areas on backslopes of mountains
Parent material: Altapeak—volcanic ash mixed with colluvium derived from granodiorite; Alnult—colluvium derived from granitic rock mixed with volcanic ash
Slope range: Altapeak—30 to 60 percent; Alnult—45 to 60 percent
Elevation: 3,500 to 5,000 feet
Average annual precipitation: 70 to 85 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): Altapeak—90 to 120 days; Alnult—100 to 120 days
Frost-free season (32 degrees F): Altapeak—50 to 80 days; Alnult—60 to 80 days
Rock fragments on surface: Alnult—stones and boulders cover 5 to 12 percent

Soil Properties

Typical profile of Altapeak:
Organic mat on surface—4 inches thick
0 to 13 inches—dark brown and strong brown gravelly sandy loam (upper part of subsoil when mixed)
13 to 29 inches—light brown very stony loamy sand (lower part of subsoil)
29 to 54 inches—very pale brown extremely stony loamy sand (substratum)
54 to 64 inches—weathered granodiorite

Typical profile of Alnult:
0 to 6 inches—dark gray very stony fine sandy loam (surface layer)
6 to 32 inches—dark reddish brown very stony fine sandy loam (upper part of subsoil)
32 to 50 inches—brown very gravelly fine sandy loam (lower part of subsoil)
50 to 60 inches—reddish brown extremely gravelly fine sandy loam (substratum)
Depth class: Altapeak—deep; Alnult—very deep
Drainage class: Well drained
Permeability: Altapeak—moderately rapid in the upper 13 inches and rapid below this depth; Alnult—moderate
Available water capacity: Altapeak—low; Alnult—moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus and Chinkmin)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

14—Altapeak-Alnult association, 60 to 90 percent slopes*

Composition

Altapeak and similar soils—40 percent
Alnult and similar soils—30 percent
Contrasting inclusions—30 percent

Map Unit Characteristics

Position on landscape: Altapeak—backslopes of mountains; Alnult—slightly convex areas on backslopes of mountains
Parent material: Altapeak—volcanic ash mixed with colluvium derived from granodiorite; Alnult—colluvium derived from granitic rock mixed with volcanic ash
Slope range: 60 to 90 percent
Elevation: 3,500 to 5,000 feet
Average annual precipitation: 70 to 85 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Altapeak—40 to 42 degrees F (cryic); Alnult—39 to 41 degrees F (cryic)
Growing season (28 degrees F): Altapeak—100 to 130 days; Alnult—100 to 120 days
Frost-free season (32 degrees F): Altapeak—60 to 90 days; Alnult—60 to 80 days
Rock fragments on surface: Alnult—stones and boulders cover 5 to 12 percent

Soil Properties

Typical profile of Altapeak:
Organic mat on surface—4 inches thick

0 to 6 inches—brown and dark brown gravelly sandy loam (surface layer when mixed)
6 to 26 inches—brown and yellowish brown very gravelly loamy sand (subsoil)
26 to 48 inches—light olive brown very cobbly loamy sand (substratum)
48 to 58 inches—weathered granodiorite

Typical profile of Alnult:
0 to 6 inches—dark gray very stony fine sandy loam (surface layer)
6 to 32 inches—dark reddish brown very stony fine sandy loam (upper part of subsoil)
32 to 50 inches—brown very gravelly fine sandy loam (lower part of subsoil)
50 to 60 inches—reddish brown extremely gravelly fine sandy loam (substratum)

Depth class: Altapeak—deep; Alnult—very deep
Drainage class: Well drained
Permeability: Altapeak—moderately rapid in the upper 20 inches and rapid below this depth; Alnult—moderate
Available water capacity: Altapeak—low; Alnult—moderately high

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil (Chiwaukum)
- Soils that consist of angular rock fragments (Reggad)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus and Chinkmin)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

15—Altapeak, warm-Alnult association, 30 to 60 percent slopes*

Composition

Altapeak, warm, and similar soils—40 percent
Alnult and similar soils—30 percent
Contrasting inclusions—30 percent

Map Unit Characteristics

Position on landscape: Altapeak, warm—backslopes of mountains; Alnult—slightly convex areas on backslopes of mountains
Parent material: Altapeak, warm—volcanic ash mixed with colluvium derived from granodiorite; Alnult—colluvium derived from granitic rock mixed with volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,500 to 5,000 feet
Average annual precipitation: 70 to 85 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Altapeak, warm—40 to 42 degrees F (cryic); Alnult—39 to 41 degrees F (cryic)

Growing season (28 degrees F): Altapeak, warm—100 to 130 days; Alnult—100 to 120 days
Frost-free season (32 degrees F): Altapeak, warm—60 to 90 days; Alnult—60 to 80 days
Rock fragments on surface: Alnult—stones and boulders cover 5 to 12 percent

Soil Properties

Typical profile of Altapeak, warm:
Organic mat on surface—4 inches thick
0 to 6 inches—brown and dark brown gravelly sandy loam (surface layer when mixed)
6 to 26 inches—brown very gravelly loamy sand (subsoil)
26 to 48 inches—yellowish brown and light olive brown very cobbly loamy sand (substratum)
48 to 58 inches—weathered granodiorite
Typical profile of Alnult:
0 to 6 inches—dark gray very stony fine sandy loam (surface layer)
6 to 32 inches—dark reddish brown very stony fine sandy loam (upper part of subsoil)
32 to 50 inches—brown very gravelly fine sandy loam (lower part of subsoil)
50 to 60 inches—reddish brown extremely gravelly fine sandy loam (substratum)
Depth class: Altapeak, warm—deep; Alnult—very deep
Drainage class: Well drained
Permeability: Altapeak, warm—moderately rapid in the upper 26 inches and rapid below this depth; Alnult—moderate
Available water capacity: Altapeak, warm—low; Alnult—moderately high

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil (Chiwaukum)
- Soils that consist of angular rock fragments (Reggad)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus and Chinkmin)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

16—Anatone-Blewett complex, 30 to 60 percent slopes

Composition

Anatone and similar soils—60 percent
Blewett and similar soils—30 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Anatone—commonly in convex areas of backslopes,

of mountains, that have a southerly aspect; Blewett—commonly in concave areas of backslopes, of mountains, that commonly have a southerly exposure
Parent material: Anatone—residuum and colluvium derived from basalt and andesite mixed with loess and volcanic ash; Blewett—colluvium and residuum derived from sandstone with minor amounts of loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,600 to 4,600 feet
Average annual precipitation: Anatone—18 to 24 inches; Blewett—22 to 24 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Anatone—43 to 45 degrees F (frigid); Blewett—42 to 44 degrees F (frigid)
Growing season (28 degrees F): 135 to 170 days
Frost-free season (32 degrees F): Anatone—100 to 130 days; Blewett—90 to 130 days
Rock fragments on surface: Anatone—cobbles cover 1 to 3 percent

Soil Properties

Typical profile of Anatone:
0 to 4 inches—grayish brown cobbly loam (surface layer)
4 to 11 inches—brown very gravelly loam (subsoil)
11 to 15 inches—unweathered andesite
Typical profile of Blewett:
Organic mat on surface—0.5 inch thick
0 to 3 inches—brown very gravelly sandy loam (surface layer)
3 to 10 inches—yellowish brown extremely gravelly sandy loam (subsoil)
10 to 14 inches—unweathered sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Contrasting Inclusions

- Soils that have a clay loam subsoil and are very deep (Loneridge)
- Soils that have a dark surface layer and clay loam subsoil and are very deep (Stemilt)
- Soils that have a dark surface layer and clay subsoil and are very deep (Tronsen)
- Soils that are 0 to 10 percent rock fragments and are very deep (Nard)
- Rock outcrop

Development Limitations

Anatone
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

Operability Considerations

Blewett
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate

Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

17—Anatone-Rock outcrop complex, 30 to 60 percent slopes

Composition

Anatone and similar soils—70 percent
Rock outcrop—15 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that have an easterly or southeasterly aspect
Parent material: Residuum and colluvium derived from basalt and andesite mixed with loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,800 to 4,500 feet
Average annual precipitation: 18 to 24 inches
Average annual air temperature: 43 to 45 degrees F (frigid)
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Cobbles cover 1 to 3 percent

Soil Properties

Typical profile of Anatone:
0 to 4 inches—grayish brown cobbly loam (surface layer)
4 to 11 inches—brown very gravelly loam (subsoil)
11 to 15 inches—unweathered andesite
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Rock Outcrop

Kind of rock: Andesite and basalt

Contrasting Inclusions

- Soils that have a clay loam subsoil and are very deep (Loneridge)
- Soils that have a dark surface layer and clay loam subsoil and are very deep (Stemilt)
- Soils that have a dark surface layer and clay subsoil and are very deep (Tronsen)

Development Limitations

Anatone
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

18—Andic Cryochrepts, very steep*

Composition

Andic Cryochrepts and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Avalanche chutes on backslopes of mountains and cirque headwalls
Parent material: Volcanic ash mixed with colluvium
Slope range: 40 to 120 percent
Elevation: 2,500 to 8,000 feet
Average annual precipitation: 40 to 150 inches
Average annual air temperature: 38 to 43 degrees F (cryic)
Growing season (28 degrees F): 90 to 110 days
Frost-free season (32 degrees F): 50 to 80 days
Rock fragments on surface: Stones and boulders cover 10 to 50 percent

Soil Properties

Reference profile:
Organic mat on surface—3 inches thick
0 to 4 inches—yellowish brown extremely stony loam (surface layer)
4 to 10 inches—grayish brown very cobbly loam (subsoil)
10 to 60 inches—dark yellowish brown very cobbly loam (substratum)
Depth class: Moderately deep to very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low to moderately high

Contrasting Inclusions

- Soils that have a very gravelly loamy sand subsoil (Altapeak)
- Soils that are volcanic ash and pumice throughout (Fernow)
- Soils that are volcanic ash throughout (Isella)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

19—Andic Cryumbrepts, deep, steep*

Composition

Andic Cryumbrepts, deep, and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that have a southerly aspect

Parent material: Volcanic ash and loess mixed with colluvium and residuum derived from metamorphic and igneous rock
Slope range: 30 to 65 percent
Elevation: 5,400 to 7,200 feet
Average annual precipitation: 35 to 75 inches
Average annual air temperature: 38 to 42 degrees F (cryic)
Frost-free season (32 degrees F): 50 to 90 days
Rock fragments on surface: Stones cover 5 percent

Soil Properties

Reference profile:
0 to 8 inches—dark grayish brown stony sandy loam (surface layer when mixed)
8 to 13 inches—grayish brown gravelly sandy loam (subsurface layer)
13 to 19 inches—dark brown gravelly sandy loam (upper part of subsoil)
19 to 24 inches—brown very gravelly sandy loam (lower part of subsoil)
24 to 60 inches—grayish brown very gravelly sandy loam and extremely gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that are volcanic ash and pumice (Goffpeak)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Soils that have an extremely gravelly loamy coarse sand substratum (Limking)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—moderate
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

20—Andic Cryumbrepts, steep*

Composition

Andic Cryumbrepts and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Shoulders, ridgetops, and backslopes, of mountains, that have a southerly aspect
Parent material: Volcanic ash and loess mixed with colluvium and residuum derived from gneiss, schist, and granitic rock
Slope range: 30 to 60 percent
Elevation: 4,200 to 8,250 feet
Average annual precipitation: 40 to 60 inches
Average annual air temperature: 38 to 40 degrees F (cryic)
Frost-free season (32 degrees F): 50 to 80 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Reference profile:
  0 to 9 inches—dark grayish brown stony sandy loam (surface layer)
  9 to 14 inches—dark yellowish brown gravelly fine sandy loam (subsoil)
  14 to 24 inches—grayish brown cobbly fine sandy loam (substratum)
  24 to 34 inches—fractured unweathered schist
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that do not have a dark surface layer and have bedrock at a depth of 40 to 60 inches (Surgh)
- Soils that are volcanic ash and pumice and have bedrock at a depth of 40 to 60 inches (Goffpeak)
- Soils that have a dark surface layer less than 9 inches thick (Fears)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—moderate
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—slope
Brush control: Severe—slope

21—Andic Cryumbrepts-Haplocryods-Rock outcrop complex, steep and very steep*

Composition

Andic Cryumbrepts and similar soils—30 percent
Haplocryods and similar soils—30 percent
Rock outcrop—15 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Andic Cryumbrepts—convex areas of backslopes, of mountains, and ridge crests that generally have a southerly aspect; Haplocryods—concave areas of mountainsides that generally have a northerly aspect, and cirque basins
Parent material: Andic Cryumbrepts—volcanic ash and loess mixed with colluvium and residuum derived from metamorphic and igneous rock; Haplocryods—volcanic ash mixed with glacial till or colluvium and residuum derived from metamorphic and igneous rock
Slope range: 30 to 75 percent
Elevation: 3,500 to 8,000 feet
Average annual precipitation: 35 to 75 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: Andic Cryumbrepts—38 to 40 degrees F (cryic); Haplocryods—35 to 39 degrees F (cryic)

Growing season (28 degrees F): Haplocryods—75 to 95 days
Frost-free season (32 degrees F): Andic Cryumbrepts—50 to 80 days; Haplocryods—30 to 65 days
Rock fragments on surface: Andic Cryumbrepts—stones cover 1 to 5 percent; Haplocryods—stones and boulders cover 1 to 3 percent

Soil Properties

Reference profile of Andic Cryumbrepts:
0 to 9 inches—dark grayish brown stony sandy loam (surface layer)
9 to 14 inches—dark yellowish brown gravelly fine sandy loam (subsoil)
14 to 24 inches—grayish brown cobbly fine sandy loam (substratum)
24 to 34 inches—fractured unweathered schist
Reference profile of Haplocryods:
Organic mat on surface—1 inch thick
0 to 3 inches—gray stony sandy loam (surface layer)
3 to 13 inches—dark brown and strong brown fine sandy loam (upper part of subsoil)
13 to 32 inches—yellowish brown sandy loam (lower part of subsoil)
32 to 60 inches—light yellowish brown extremely cobbly loam (substratum)
Depth class: Andic Cryumbrepts—moderately deep; Haplocryods—very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Andic Cryumbrepts—low; Haplocryods—moderately high

Rock Outcrop

Kind of rock: Gneiss, schist, and granite

Contrasting Inclusions

- Soils that are volcanic ash and pumice and have bedrock at a depth of 40 to 60 inches (Goffpeak)
- Soils that are volcanic ash and pumice throughout (Totem)

Operability Considerations

Andic Cryumbrepts and Haplocryods
Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

22—Andic Cryumbrepts-Rock outcrop complex, steep and very steep*

Composition

Andic Cryumbrepts and similar soils—55 percent
Rock outcrop—20 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, and ridgetops that generally have a southerly exposure
Parent material: Volcanic ash and loess mixed with colluvium and residuum derived from metamorphic and igneous rock
Slope range: 30 to 75 percent
Elevation: 5,400 to 7,500 feet
Average annual precipitation: 35 to 75 inches
Average annual air temperature: 38 to 40 degrees F (cryic)
Frost-free season (32 degrees F): 50 to 80 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Reference profile of Andic Cryumbrepts:
0 to 9 inches—dark grayish brown stony sandy loam (surface layer)
9 to 14 inches—dark yellowish brown gravelly fine sandy loam (subsoil)
14 to 24 inches—grayish brown cobbly fine sandy loam (substratum)
24 to 34 inches—fractured unweathered schist
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Rock Outcrop

Kind of rock: Gneiss, schist, and granitic rock

Contrasting Inclusions

- Soils that do not have a dark surface layer and are very deep (Almac and Fears)
- Soils that do not have a dark surface layer and are deep (Surgh)
- Rubble land

Development Limitations

Andic Cryumbrepts
Corrosivity: Uncoated steel—moderate; concrete—moderate
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—slope
Brush control: Severe—slope

23—Andic Cryumbrepts, moist-Rock outcrop complex, steep and very steep*

Composition

Andic Cryumbrepts, moist, and similar soils—50 percent
Rock outcrop—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains and ridge crests
Parent material: Volcanic ash mixed with residuum and colluvium derived from metamorphic and igneous rock

Slope range: 30 to 75 percent
Elevation: 4,000 to 8,000 feet
Average annual precipitation: 75 to 150 inches
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 50 to 90 days

Soil Properties

Reference profile of Andic Cryumbrepts:
Organic mat on surface—1 inch thick
0 to 10 inches—brown sandy loam (surface layer)
10 to 16 inches—yellowish brown gravelly sandy loam (upper part of subsoil)
16 to 33 inches—light yellowish brown very gravelly sandy loam (lower part of subsoil)
33 to 51 inches—pale yellow very gravelly sandy loam (substratum)
51 to 55 inches—granodiorite
Depth class: Moderately deep and deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Low

Rock Outcrop

Kind of rock: Granitic rock, gneiss, schist, and andesite

Contrasting Inclusions

- Soils that have a loamy sand subsoil (Altapeak)
- Soils that are volcanic ash and pumice (Fernow)
- Soils that are volcanic ash (Isella)
- Rubble land

Development Limitations

Andic Cryumbrepts
Corrosivity: Uncoated steel—moderate; concrete—moderate
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

24—Andic Haplumbrepts-Rock outcrop complex, very steep*

Composition

Andic Haplumbrepts and similar soils—45 percent
Rock outcrop—30 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that have a southerly or westerly aspect
Parent material: Colluvium derived from metamorphic and igneous rock mixed with volcanic ash and loess
Slope range: 45 to 90 percent

Elevation: 2,200 to 3,600 feet
Average annual precipitation: 70 to 95 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones and boulders cover 1 to 3 percent

Soil Properties

Reference profile of Andic Haplumbrepts:
Organic mat on surface—2 inches thick
0 to 8 inches—dark grayish brown stony fine sandy loam (surface layer)
8 to 16 inches—yellowish brown very gravelly fine sandy loam (upper part of subsoil)
16 to 29 inches—yellowish brown very gravelly fine sandy loam (lower part of subsoil)
29 to 33 inches—unweathered gneiss
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Rock Outcrop

Kind of rock: Gneiss, schist, and granitic rock

Contrasting Inclusions

- Soils that have a very gravelly loamy sand subsoil (Kladnick)
- Soils that receive less rainfall (Mountaineer)
- Soils that have bedrock at a depth of 10 to 20 inches
- Rubble land

Operability Considerations

Andic Haplumbrepts
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

25—Angle stony loamy sand, 60 to 90 percent slopes

Composition

Angle and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Terrace escarpments
Parent material: Glacial outwash with a mixture of loess and volcanic ash in the upper part
Slope range: 60 to 90 percent

Elevation: 2,000 to 3,500 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
    Organic mat on surface—1 inch thick
    0 to 2 inches—light gray stony loamy sand (surface layer)
    2 to 7 inches—light gray loamy sand (subsurface layer)
    7 to 23 inches—very pale brown cobbly loamy sand (upper part of subsoil)
    23 to 42 inches—very pale brown loamy sand (lower part of subsoil)
    42 to 60 inches—multicolored sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Rapid in the upper 7 inches, moderately rapid to a depth of 42 inches, and rapid to a depth of 60 inches
Available water capacity: Moderate

Contrasting Inclusions

- Soils that are volcanic ash and pumice throughout (Choralmont and Ramparter)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Slight
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Not available
Cut and fill slope stability: Slough

26—Aquic Cryumbrepts, nearly level to gently sloping*

Composition

Aquic Cryumbrepts and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Flood plains and depressions of mountains
Parent material: Alluvium
Slope range: 0 to 8 percent
Elevation: 2,000 to 5,800 feet
Average annual precipitation: 40 to 120 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Reference profile:
0 to 4 inches—grayish brown loamy fine sand (upper part of surface layer)
4 to 8 inches—brown very fine sandy loam (lower part of surface layer)
8 to 14 inches—dark grayish brown loamy fine sand (upper part of underlying material)
14 to 29 inches—grayish brown sand (middle part of underlying material)
29 to 60 inches—gray, stratified, mottled gravelly loamy fine sand and sand and multicolored, mottled extremely gravelly sand and coarse sand (lower part of underlying material)
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately rapid in the upper 8 inches and moderate to rapid below this depth
Available water capacity: Moderately high
Seasonal high water table: Present in January through December with the highest level (1 foot above the surface to a depth of 0.3 foot below the surface) in January through April
Frequency of flooding: Frequent, long periods in November through April
Periods of ponding: Brief in January through April

Contrasting Inclusions

- Soils that are well drained (Altapeak)
- Soils that are moderately well drained and have dense glacial till at a depth of 20 to 40 inches (Chinkmin)
- Small areas of water

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Slight
Hazard of soil damage by fire: Slight
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

27—Ardening stony loam, 30 to 60 percent slopes

Composition

Ardening and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have a southerly aspect
Parent material: Residuum and colluvium derived mainly from weathered schist mixed with loess
Slope range: 30 to 60 percent
Elevation: 2,600 to 4,500 feet
Average annual precipitation: 20 to 28 inches
Snowpack: More than 1 foot in December through February

Average annual air temperature: 45 to 48 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 6 inches—grayish brown stony loam (upper part of surface layer)
6 to 18 inches—brown gravelly loam (lower part of surface layer)
18 to 26 inches—brown cobbly loam (subsoil)
26 to 42 inches—pale brown cobbly loam (substratum)
42 to 52 inches—weathered schist
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a dark surface layer less than 10 inches thick and a very cobbly sandy loam subsoil (Ardenvoir)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have a very stony sandy loam subsoil (Inkler)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

28—Ardenmont coarse sandy loam, 8 to 30 percent slopes

Composition

Ardenmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have a northerly aspect
Parent material: Residuum and colluvium derived mainly from schist mixed with minor amounts of volcanic ash and loess in the upper part
Slope range: 8 to 30 percent
Elevation: 2,200 to 4,700 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 120 to 160 days
Frost-free season (32 degrees F): 80 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—3 inches thick
0 to 4 inches—light brownish gray coarse sandy loam (surface layer)
4 to 23 inches—pale brown gravelly coarse sandy loam and coarse sandy loam (upper part of subsoil)
23 to 51 inches—pale brown and light yellowish brown gravelly sandy loam (lower part of subsoil)
51 to 61 inches—weathered schist
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a very cobbly sandy loam subsoil (Ardenvoir)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have more clay in the subsoil (Nahahum)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

29—Ardenmont coarse sandy loam, 30 to 60 percent slopes

Composition

Ardenmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have a northerly aspect
Parent material: Residuum and colluvium derived from schist mixed with minor amounts of volcanic ash and loess in the upper part
Slope range: 30 to 60 percent
Elevation: 2,200 to 4,700 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 120 to 160 days
Frost-free season (32 degrees F): 80 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—3 inches thick
0 to 4 inches—light brownish gray coarse sandy loam (surface layer)

4 to 23 inches—pale brown gravelly coarse sandy loam and coarse sandy loam (upper part of subsoil)
23 to 51 inches—light yellowish brown gravelly loamy coarse sand (lower part of subsoil)
51 to 61 inches—weathered schist

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a very cobbly sandy loam subsoil (Ardenvoir)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have more clay in the subsoil (Nahahum)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

30—Ardenmont coarse sandy loam, 60 to 90 percent slopes

Composition

Ardenmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have a northerly aspect
Parent material: Residuum and colluvium derived mainly from schist mixed with minor amounts of volcanic ash and loess in the upper part
Slope range: 60 to 90 percent
Elevation: 2,200 to 4,700 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 120 to 160 days
Frost-free season (32 degrees F): 80 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—3 inches thick
0 to 4 inches—light brownish gray coarse sandy loam (surface layer)
4 to 23 inches—pale brown gravelly coarse sandy loam and coarse sandy loam (upper part of subsoil)
23 to 51 inches—light yellowish brown gravelly loamy coarse sand (lower part of subsoil)
51 inches—weathered schist

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a very cobbly sandy loam substratum (Ardenvoir)
- Soils that have a very stony sandy loam subsoil (Inkler)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

31—Ardenmont-Swakane complex, 60 to 90 percent slopes

Composition

Ardenmont and similar soils—40 percent
Swakane and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Ardenmont—backslopes, of mountains, that have an easterly, westerly, or northerly aspect; Swakane—backslopes, of mountains, that have a southerly aspect
Parent material: Ardenmont—residuum and colluvium derived mainly from schist mixed with minor amounts of volcanic ash and loess in the upper part; Swakane—residuum and colluvium derived from gneiss and schist mixed with volcanic ash and loess
Slope range: 60 to 90 percent
Elevation: 2,600 to 3,600 feet
Average annual precipitation: Ardenmont—18 to 24 inches; Swakane—16 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: Ardenmont—42 to 44 degrees F (frigid); Swakane—47 to 49 degrees F (mesic)
Growing season (28 degrees F): Ardenmont—120 to 160 days
Frost-free season (32 degrees F): Ardenmont—80 to 120 days; Swakane—130 to 155 days

Soil Properties

Typical profile of Ardenmont:
Organic mat on surface—3 inches thick
0 to 4 inches—light brownish gray coarse sandy loam (surface layer)
4 to 23 inches—pale brown gravelly coarse sandy loam and coarse sandy loam (upper part of subsoil)

23 to 51 inches—light yellowish brown gravelly loamy coarse sand (lower part of subsoil)
51 inches—weathered schist

Typical profile of Swakane:
0 to 2 inches—dark brown stony sandy loam (upper part of surface layer)
2 to 15 inches—yellowish brown very gravelly coarse sandy loam (lower part of surface layer)
15 to 19 inches—fractured unweathered gneiss

Depth class: Ardenmont—deep; Swakane—shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Ardenmont—moderately high; Swakane—very low

Contrasting Inclusions

- Soils that have a very cobbly sandy loam substratum (Ardenvoir)
- Soils that have a very stony sandy loam subsoil (Inkler)
- Rock outcrop

Operability Considerations

Ardenmont
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

Development Limitations

Swakane
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

32—Ardenvoir stony fine sandy loam, 30 to 60 percent slopes

Composition

Ardenvoir and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have a northerly aspect
Parent material: Residuum and colluvium derived from gneiss and schist mixed with loess and volcanic ash in the upper part
Slope range: 30 to 60 percent
Elevation: 2,200 to 4,700 feet
Average annual precipitation: 20 to 24 inches

Snowpack: More than 1 foot in December through February
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 120 to 160 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 6 inches—light brownish gray stony fine sandy loam (surface layer)
6 to 12 inches—pale brown very cobbly sandy loam (upper part of subsoil)
12 to 26 inches—light yellowish brown extremely gravelly coarse sandy loam (lower part of subsoil)
26 to 56 inches—light yellowish brown extremely gravelly coarse sandy loam (substratum)
56 to 60 inches—fractured unweathered gneiss
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have more clay in the subsoil (Nahahum)
- Soils that have less rock fragments in the subsoil (Ardenmont)
- Soils that have a dark surface layer more than 10 inches thick and less rock fragments in the subsoil (Shamel)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

33—Ardenvoir stony fine sandy loam, 60 to 90 percent slopes

Composition

Ardenvoir and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have a northerly aspect
Parent material: Residuum and colluvium derived from gneiss and schist mixed with loess and volcanic ash in the upper part
Slope range: 60 to 90 percent
Elevation: 2,200 to 4,700 feet
Average annual precipitation: 20 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 42 to 44 degrees F (frigid)

Growing season (28 degrees F): 120 to 160 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 6 inches—light brownish gray stony fine sandy loam (surface layer)
6 to 12 inches—pale brown very cobbly sandy loam (upper part of subsoil)
12 to 26 inches—light yellowish brown extremely gravelly coarse sandy loam (lower part of subsoil)
26 to 56 inches—light yellowish brown extremely gravelly coarse sandy loam (substratum)
56 to 60 inches—fractured unweathered gneiss
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have more clay in the subsoil (Nahahum)
- Soils that have less rock fragments in the subsoil (Ardenmont)
- Soils that have a dark surface layer more than 10 inches thick and less rock fragments in the subsoil (Shamel)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

34—Azwell-Rock outcrop complex, 30 to 60 percent slopes

Composition

Azwell and similar soils—75 percent
Rock outcrop—15 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have a southerly aspect
Parent material: Residuum and colluvium derived from gneiss and schist mixed with volcanic ash
Slope range: 30 to 60 percent
Elevation: 5,000 to 6,500 feet
Average annual precipitation: 30 to 40 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 40 to 42 degrees F (cryic)

Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of Azwell:
Organic mat on surface—0.25 inch thick
0 to 4 inches—dark grayish brown stony loam (surface layer)
4 to 15 inches—dark grayish brown cobbly loam (subsoil)
15 to 26 inches—dark grayish brown very stony fine sandy loam (substratum)
26 to 30 inches—fractured unweathered gneiss
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Rock Outcrop

Kind of rock: Gneiss and schist

Inclusions

Contrasting

- Soils that have volcanic ash in the upper part of the subsoil and have bedrock at a depth of more than 60 inches (Almac)
- Soils that have bedrock at a depth of 40 to 60 inches (Surgh)
- Soils that are volcanic ash and pumice throughout (Wedge)
- Soils that have an extremely cindery sandy loam subsoil (Wedgemont)

Operability Considerations

Azwell
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

35—Bagmont gravelly loam, 40 to 90 percent slopes

Composition

Bagmont and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Loess and volcanic ash mixed with colluvium and residuum derived from schist and gneiss
Slope range: 40 to 90 percent
Elevation: 4,800 to 5,800 feet
Average annual precipitation: 25 to 30 inches
Average annual air temperature: 41 to 43 degrees F (cryic)
Frost-free season (32 degrees F): 80 to 110 days

Soil Properties

Typical profile:
0 to 12 inches—dark grayish brown gravelly loam and very gravelly fine sandy loam (surface layer)
12 to 22 inches—dark brown very gravelly fine sandy loam (subsoil)
22 to 38 inches—yellowish brown extremely gravelly sandy loam (substratum)
38 to 48 inches—fractured weathered schist
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have bedrock at a depth of 40 to 60 inches (Surgh)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—severe
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

36—Bigcreek cindery sandy loam, 0 to 8 percent slopes

Composition

Bigcreek and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces near rivers and streams
Parent material: Volcanic ash and pumice over glacial outwash
Slope range: 0 to 8 percent
Elevation: 1,800 to 2,500 feet
Average annual precipitation: 30 to 45 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 125 to 160 days
Frost-free season (32 degrees F): 75 to 110 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 5 inches—pale brown cindery sandy loam (surface layer)
5 to 16 inches—light yellowish brown cindery sandy loam (upper part of subsoil)
16 to 30 inches—white and yellow cinders (lower part of subsoil)
30 to 33 inches—white, yellow, and very dark gray very coarse sand (upper part of substratum)

33 to 38 inches—light yellowish brown gravelly sandy loam (middle part of substratum)
38 to 60 inches—multicolored extremely gravelly sand (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 16 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that are volcanic ash and pumice throughout (Choralmont)
- Soils that have very bouldery sandy loam glacial till at a depth of 18 to 24 inches (Natapoc)
- Soils that are moderately well drained and do not have volcanic ash in the profile (Mippon)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Stable

37—Billyridge gravelly sandy loam, 0 to 8 percent slopes

Composition

Billyridge and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Alluvial fans
Parent material: Alluvium
Slope range: 0 to 8 percent
Elevation: 1,100 to 1,700 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 145 to 185 days
Frost-free season (32 degrees F): 105 to 145 days

Soil Properties

Typical profile:
0 to 16 inches—grayish brown gravelly sandy loam (surface layer)
16 to 30 inches—brown gravelly sandy loam (upper part of subsoil)
30 to 40 inches—pale brown gravelly sandy loam (lower part of subsoil)
40 to 60 inches—pale brown gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that receive less rainfall (Brief)

- Soils that have more rock fragments in the subsoil (Burnscreek)
- Soils that have a very cobbly loamy sand substratum (Mippon)
- Soils that have more rock fragments in the subsoil and have a colder temperature regime (Zeb)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

38—Billyridge gravelly sandy loam, 8 to 15 percent slopes

Composition

Billyridge and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Alluvial fans
Parent material: Alluvium
Slope range: 8 to 15 percent
Elevation: 1,200 to 1,700 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 145 to 185 days
Frost-free season (32 degrees F): 105 to 145 days

Soil Properties

Typical profile:
0 to 16 inches—grayish brown gravelly sandy loam (surface layer)
16 to 30 inches—brown gravelly sandy loam (upper part of subsoil)
30 to 40 inches—pale brown gravelly sandy loam (lower part of subsoil)
40 to 60 inches—pale brown gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that receive less rainfall (Brief)
- Soils that have more rock fragments in the subsoil (Burnscreek)
- Soils that have a very cobbly loamy sand substratum (Mippon)
- Soils that have more rock fragments in the subsoil and have a colder temperature regime (Zeb)
- Soils that have more clay in the subsoil and have a colder temperature regime (Nard)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate

Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

39—Billyridge gravelly sandy loam, 15 to 25 percent slopes

Composition

Billyridge and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Alluvial fans
Parent material: Alluvium
Slope range: 15 to 25 percent
Elevation: 1,200 to 1,700 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 145 to 185 days
Frost-free season (32 degrees F): 105 to 145 days

Soil Properties

Typical profile:
  0 to 16 inches—grayish brown gravelly sandy loam (surface layer)
  16 to 30 inches—brown gravelly sandy loam (upper part of subsoil)
  30 to 40 inches—pale brown gravelly sandy loam (lower part of subsoil)
  40 to 60 inches—pale brown gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that receive less rainfall (Brief)
- Soils that have more rock fragments in the subsoil (Burnscreek)
- Soils that have a very cobbly loamy sand substratum (Mippon)
- Soils that have more rock fragments in the subsoil and have a colder temperature regime (Zeb)
- Soils that have more clay in the subsoil and have a colder temperature regime (Nard)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

40—Bisping fine sandy loam, 3 to 15 percent slopes

Composition

Bisping and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Broad ridges
Parent material: Volcanic ash and pumice over residuum derived from granodiorite or rhyolite
Slope range: 3 to 15 percent
Elevation: 2,200 to 3,500 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 160 to 200 days
Frost-free season (32 degrees F): 130 to 160 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 4 inches—grayish brown fine sandy loam (upper part of surface layer)
4 to 10 inches—brown cindery fine sandy loam (lower part of surface layer)
10 to 19 inches—pale brown cindery fine sandy loam (subsoil)
19 to 30 inches—pale brown cindery fine sandy loam (upper part of substratum)
30 to 60 inches—light yellowish brown and brownish yellow loam (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have a very cindery and extremely cindery sandy loam subsoil (Palmich)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)
- Soils that have bedrock at a depth of 20 to 40 inches and have a colder temperature regime (Switchback)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

41—Bisping fine sandy loam, 15 to 30 percent slopes

Composition

Bisping and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Broad ridgetops and mountainsides that have an easterly, westerly, or southerly aspect
Parent material: Volcanic ash and pumice over residuum and colluvium derived from granodiorite or rhyolite
Slope range: 15 to 30 percent
Elevation: 2,200 to 3,500 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 160 to 200 days
Frost-free season (32 degrees F): 130 to 160 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 4 inches—grayish brown fine sandy loam (upper part of surface layer)
4 to 10 inches—brown cindery fine sandy loam (lower part of surface layer)
10 to 19 inches—pale brown cindery fine sandy loam (subsoil)
19 to 30 inches—pale brown cindery fine sandy loam (upper part of substratum)
30 to 60 inches—light yellowish brown and brownish yellow loam (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have a very cindery and extremely cindery sandy loam subsoil (Palmich)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)
- Soils that have bedrock at a depth of 20 to 40 inches and have a colder temperature regime (Switchback)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

42—Bisping fine sandy loam, 30 to 60 percent slopes

Composition

Bisping and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have an easterly, westerly, or southerly aspect

Parent material: Volcanic ash and pumice over residuum and colluvium derived from granodiorite or rhyolite
Slope range: 30 to 60 percent
Elevation: 2,200 to 3,500 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 160 to 200 days
Frost-free season (32 degrees F): 130 to 160 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 4 inches—grayish brown fine sandy loam (upper part of surface layer)
4 to 10 inches—brown cindery fine sandy loam (lower part of surface layer)
10 to 19 inches—pale brown cindery fine sandy loam (subsoil)
19 to 30 inches—pale brown cindery fine sandy loam (upper part of substratum)
30 to 60 inches—light yellowish brown and brownish yellow loam (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have a very cindery and extremely cindery sandy loam subsoil (Palmich)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)
- Soils that have bedrock at a depth of 20 to 40 inches and have a colder temperature regime (Switchback)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

43—Bjork loam, 30 to 65 percent slopes

Composition

Bjork and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Side slopes and ridgetops, of foothills and mountains, that generally have a southerly aspect
Parent material: Loess mixed with residuum and colluvium derived from schist, sandstone, and conglomerate
Slope range: 30 to 65 percent
Elevation: 1,250 to 3,600 feet

Average annual precipitation: 9 to 14 inches
Average annual air temperature: 48 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 165 to 185 days

Soil Properties

Typical profile:
  0 to 10 inches—grayish brown loam (surface layer)
  10 to 24 inches—yellowish brown clay loam (subsoil)
  24 to 34 inches—weathered schist
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Borland)
- Soils that have a dark surface layer more than 20 inches thick and are very deep (Yaxon)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—slope
Brush control: Severe—slope

44—Bjork-Rock outcrop complex, 25 to 75 percent slopes

Composition

Bjork and similar soils—55 percent
Rock outcrop—30 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes of foothills and mountains that generally have a southerly aspect
Parent material: Loess mixed with residuum and colluvium derived from schist, sandstone, and conglomerate
Slope range: 25 to 75 percent
Elevation: 1,600 to 3,000 feet
Average annual precipitation: 9 to 14 inches
Average annual air temperature: 48 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 165 to 185 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of Bjork:
  0 to 6 inches—grayish brown stony loam (surface layer)
  6 to 20 inches—brown and yellowish brown sandy clay loam (upper part of subsoil)

20 to 30 inches—light yellowish brown sandy clay loam (lower part of subsoil)
30 inches—weathered sandstone
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Schist, sandstone, and conglomerate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Borland)
- Soils that have a dark surface layer more than 20 inches thick and are very deep (Yaxon)

Development Limitations

Bjork
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—slope
Brush control: Severe—slope

45—Blag-Cle Elum-Rock outcrop complex, 30 to 75 percent slopes

Composition

Blag and similar soils—45 percent
Cle Elum and similar soils—25 percent
Rock outcrop—15 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Blag—slightly convex positions on backslopes, of mountains, that generally have a southerly aspect; Cle Elum—slightly concave or plane positions on backslopes, of mountains, that generally have a southerly aspect
Parent material: Blag—residuum and colluvium derived dominantly from sandstone of the Chumstick Formation; Cle Elum—residuum and colluvium derived from sandstone mixed with loess and volcanic ash in the upper part
Slope range: 30 to 75 percent
Elevation: 1,500 to 3,800 feet
Average annual precipitation: 18 to 28 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): Blag—160 to 185 days; Cle Elum—200 to 220 days
Frost-free season (32 degrees F): Blag—100 to 140 days; Cle Elum—160 to 185 days

Soil Properties

Typical profile of Blag:
0 to 6 inches—light brownish gray gravelly sandy loam (surface layer)

6 to 16 inches—pale brown gravelly sandy loam (subsoil)
16 to 20 inches—unweathered sandstone

Typical profile of Cle Elum:

Organic mat on surface—0.5 inch thick
0 to 5 inches—grayish brown loam (surface layer)
5 to 14 inches—light brownish gray loam (upper part of subsoil)
14 to 26 inches—pale brown clay loam (lower part of subsoil)
26 to 36 inches—weathered sandstone

Depth class: Blag—shallow; Cle Elum—moderately deep
Drainage class: Well drained
Permeability: Blag—moderately rapid; Cle Elum—moderate
Available water capacity: Blag—very low; Cle Elum—moderate

Rock Outcrop

Kind of rock: Sandstone

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil and have a dark surface layer 7 inches thick when mixed (Brisky)
- Soils that have more rock fragments in the subsoil and have gneiss at a depth of 10 to 20 inches (Swakane)

Operability Considerations

Blag
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

Cle Elum
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

46—Blag-Rock outcrop complex, 30 to 80 percent slopes

Composition

Blag and similar soils—50 percent
Rock outcrop—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, and ridgetops that generally have a southerly aspect
Parent material: Residuum and colluvium derived dominantly from sandstone of the Chumstick Formation
Slope range: 30 to 80 percent

Elevation: 1,500 to 4,000 feet
Average annual precipitation: 18 to 28 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 160 to 185 days
Frost-free season (32 degrees F): 100 to 140 days

Soil Properties

Typical profile of Blag:
0 to 6 inches—light brownish gray gravelly sandy loam (surface layer)
6 to 16 inches—pale brown gravelly sandy loam (subsoil)
16 to 20 inches—unweathered sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low

Rock Outcrop

Kind of rock: Sandstone

Contrasting Inclusions

- Soils that have a colder temperature regime (Blewett)
- Soils that have more rock fragments in the subsoil and have a dark surface layer 7 inches thick when mixed (Brisky)

Operability Considerations

Blag
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

47—Blewett-Rock outcrop complex, 30 to 60 percent slopes

Composition

Blewett and similar soils—65 percent
Rock outcrop—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have a southerly aspect
Parent material: Residuum and colluvium derived from sandstone mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 3,600 to 5,800 feet
Average annual precipitation: 22 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)

Growing season (28 degrees F): 130 to 170 days
Frost-free season (32 degrees F): 90 to 130 days

Soil Properties

Typical profile of Blewett:
Organic mat on surface—0.5 inch thick
0 to 3 inches—brown very gravelly sandy loam (surface layer)
3 to 10 inches—yellowish brown extremely gravelly sandy loam (subsoil)
10 to 14 inches—unweathered sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Rock Outcrop

Kind of rock: Sandstone and conglomerate dominantly of the Swauk Formation

Contrasting Inclusions

- Soils that have a warmer temperature regime (Brisky)
- Soils that have more clay in the subsoil and are very deep (Nard)
- Soils that have volcanic ash in the upper 10 inches (Scotties)
- Soils that are very deep (Shaser)

Operability Considerations

Blewett
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

48—Borland loam, 30 to 60 percent slopes

Composition

Borland and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a westerly or easterly aspect
Parent material: Residuum and colluvium derived from sandstone mixed with loess
Slope range: 30 to 60 percent
Elevation: 1,000 to 3,800 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 165 days

Soil Properties

Typical profile:
0 to 6 inches—grayish brown and brown loam (surface layer)

6 to 11 inches—yellowish brown clay loam (subsoil)
11 to 15 inches—unweathered sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Low or very low

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches and receive more rainfall (Cle Elum)
- Soils that have bedrock at a depth of 40 to 60 inches and receive more rainfall (Varelum)
- Soils that have a dark surface layer more than 20 inches thick and are very deep (Yaxon)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

49—Borland-Rock outcrop complex, 30 to 60 percent slopes

Composition

Borland and similar soils—60 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a southerly aspect
Parent material: Residuum and colluvium derived from sandstone mixed with loess
Slope range: 30 to 60 percent
Elevation: 1,000 to 3,800 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 48 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 165 days

Soil Properties

Typical profile of Borland:
0 to 6 inches—grayish brown and brown loam (surface layer)
6 to 11 inches—yellowish brown clay loam (subsoil)
11 to 15 inches—sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low

Rock Outcrop

Kind of rock: Sandstone of the Chumstick Formation

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches and receive more rainfall (Cle Elum)
- Soils that have a dark surface layer more than 20 inches thick and are very deep (Yaxon)

Development Limitations

Borland
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

50—Brief gravelly sandy loam, 0 to 15 percent slopes

Composition

Brief and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Alluvial fans and terraces on all aspects
Parent material: Alluvium derived mainly from granodiorite, gneiss, and schist
Slope range: 0 to 15 percent
Elevation: 900 to 1,500 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 46 to 48 degrees F (mesic)
Growing season (28 degrees F): 150 to 190 days
Frost-free season (32 degrees F): 120 to 160 days

Soil Properties

Typical profile:
0 to 16 inches—dark grayish brown gravelly sandy loam (surface layer)
16 to 26 inches—brown gravelly sandy loam (subsoil)
26 to 60 inches—light brownish gray very gravelly coarse sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have an extremely cobbly subsoil and receive more rainfall (Burnscreek)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

51—Brisky-Rock outcrop complex, 30 to 60 percent slopes

Composition

Brisky and similar soils—65 percent
Rock outcrop—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides and ridgetops that generally have a southerly aspect
Parent material: Colluvium derived from sandstone mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 1,500 to 4,100 feet
Average annual precipitation: 20 to 32 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 110 to 130 days

Soil Properties

Typical profile of Brisky:
  0 to 4 inches—brown very gravelly sandy loam (surface layer)
  4 to 10 inches—light yellowish brown very gravelly sandy loam (subsoil)
  10 to 14 inches—unweathered sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Rock Outcrop

Kind of rock: Sandstone

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum and Scotties)
- Soils that are very deep (Nard)

Operability Considerations

Brisky
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

52—Burch loam, 3 to 8 percent slopes

Composition

Burch and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces and bottomlands
Parent material: Alluvium
Slope range: 3 to 8 percent
Elevation: 1,200 to 1,500 feet
Average annual precipitation: 10 to 12 inches
Average annual air temperature: 48 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 165 to 190 days

Soil Properties

Typical profile:
  0 to 10 inches—dark grayish brown loam (surface layer)
  10 to 34 inches—grayish brown loam (subsoil)
  34 to 60 inches—light yellowish brown loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very high

Contrasting Inclusions

- Soils that have more clay in the subsoil (Cowiche)
- Soils that have a dark surface layer more than 20 inches thick (Yaxon)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Slight
Pipelines: Slight
Livestock ponds: Moderate—seepage
Seeding: Slight
Brush control: Slight

53—Burnscreek stony sandy loam, 3 to 30 percent slopes

Composition

Burnscreek and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Alluvial fans and terraces
Parent material: Alluvium
Slope range: 3 to 30 percent
Elevation: 1,200 to 2,400 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 145 to 185 days
Frost-free season (32 degrees F): 105 to 140 days

Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 3 inches—grayish brown stony sandy loam (surface layer)
3 to 13 inches—brown very stony sandy loam (upper part of subsoil)
13 to 32 inches—brown extremely cobbly sandy loam (lower part of subsoil)
32 to 60 inches—brown extremely cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Frequency of flooding: Rare in February through August

Contrasting Inclusions

- Soils that have an extremely cobbly loamy coarse sand substratum (Mippon)
- Soils that have a colder temperature regime (Zeb)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

54—Burrant loam, 3 to 8 percent slopes

Composition

Burrant and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces on all aspects
Parent material: Alluvium and colluvium derived from sandstone mixed with loess
Slope range: 3 to 8 percent
Elevation: 1,100 to 1,600 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Frost-free season (32 degrees F): 105 to 140 days

Soil Properties

Typical profile:
0 to 16 inches—grayish brown and brown loam (surface layer)
16 to 42 inches—light yellowish brown and pale brown loam (subsoil)
42 to 60 inches—pale brown loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Soils that have more clay in the subsoil (Varelum)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

55—Burrant loam, 8 to 25 percent slopes

Composition

Burrant and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Terraces on all aspects
Parent material: Alluvium and colluvium derived from sandstone mixed with loess
Slope range: 8 to 25 percent
Elevation: 1,100 to 1,600 feet
Average annual precipitation: 18 to 24 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Frost-free season (32 degrees F): 105 to 140 days

Soil Properties

Typical profile:
  0 to 16 inches—grayish brown and brown loam (surface layer)
  16 to 42 inches—light yellowish brown and pale brown loam (subsoil)
  42 to 60 inches—pale brown loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Soils that have more clay in the subsoil (Varelum)
- Soils that have bedrock at a depth of 10 to 20 inches (Blag)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

56—Cashmont sandy loam, 0 to 8 percent slopes

Composition

Cashmont and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Alluvial fans on all aspects
Parent material: Alluvium derived from mixed kinds of rock
Slope range: 0 to 8 percent
Elevation: 1,200 to 1,800 feet
Average annual precipitation: 10 to 12 inches
Average annual air temperature: 48 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 140 to 180 days

Soil Properties

Typical profile:
  0 to 12 inches—grayish brown sandy loam (surface layer)
  12 to 30 inches—brown gravelly sandy loam (subsoil)
  30 to 40 inches—brown gravelly coarse sandy loam (upper part of substratum)
  40 to 60 inches—pale brown very gravelly loamy sand (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Bjork)
- Soils that have more clay in the subsoil (Cowiche)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Slight
Pipelines: Slight
Livestock ponds: Moderate—seepage
Seeding: Slight
Brush control: Slight

57—Cashmont gravelly sandy loam, 8 to 25 percent slopes

Composition

Cashmont and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Alluvial fans on all aspects
Parent material: Alluvium
Slope range: 8 to 25 percent
Elevation: 1,300 to 1,800 feet
Average annual precipitation: 10 to 12 inches

Average annual air temperature: 48 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 140 to 180 days

Soil Properties

Typical profile:
 0 to 10 inches—grayish brown gravelly sandy loam (surface layer)
 10 to 28 inches—brown and yellowish brown gravelly sandy loam (subsoil)
 28 to 60 inches—pale brown gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Bjork)
- Soils that have more clay in the subsoil (Cowiche)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Moderate—slope
Pipelines: Moderate—slope
Livestock ponds: Severe—slope
Seeding: Moderate—slope
Brush control: Moderate—slope

58—Chapot extremely bouldery loam, 30 to 60 percent slopes

Composition

Chapot and similar soils—90 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Landslide material derived from weathered diabase mixed with loess and volcanic ash in the upper part
Slope range: 30 to 60 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 22 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 145 to 180 days
Frost-free season (32 degrees F): 85 to 125 days
Rock fragments on surface: Boulders cover 15 to 35 percent

Soil Properties

Typical profile:
 Organic mat on surface—0.5 inch thick
 0 to 8 inches—light brownish gray extremely bouldery loam (surface layer)
 8 to 16 inches—pale brown very stony loam (upper part of subsoil)
 16 to 60 inches—yellowish brown very bouldery clay loam (lower part of subsoil)
Depth class: Very deep

Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil (Nard)
- Soils that have bedrock at a depth of 10 to 20 inches (Blewett)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

59—Chinkmin bouldery fine sandy loam, 3 to 30 percent slopes

Composition

Chinkmin and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Toeslopes and valley bottoms
Parent material: Volcanic ash mixed with colluvium over cemented glacial till
Slope range: 3 to 30 percent
Elevation: 3,200 to 5,000 feet
Average annual precipitation: 80 to 100 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 90 to 110 days
Frost-free season (32 degrees F): 50 to 80 days
Rock fragments on surface: Boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—5 inches thick
  0 to 4 inches—light gray and dark reddish brown bouldery fine sandy loam (surface layer when mixed)
  4 to 7 inches—strong brown and reddish brown gravelly fine sandy loam (upper part of subsoil)
  7 to 18 inches—strong brown and brownish yellow gravelly sandy loam (middle part of subsoil)
  18 to 36 inches—yellowish brown and pale yellow very gravelly loamy coarse sand (lower part of subsoil)
  36 to 40 inches—light gray cemented glacial till
Depth class: Moderately deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Moderate
Seasonal high water table: Present in November through July (1.5 to 3.0 feet)

Contrasting Inclusions

- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that are poorly drained (Aquic Cryofluvents)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

60—Chinkmin bouldery fine sandy loam, 30 to 60 percent slopes

Composition

Chinkmin and similar soils—85 percent
Contrasting inclusions—15 percent

Soil Properties

Position on landscape: Mountainsides on all aspects
Parent material: Volcanic ash mixed with colluvium over cemented glacial till
Slope range: 30 to 60 percent
Elevation: 3,200 to 5,000 feet
Average annual precipitation: 80 to 100 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 90 to 110 days
Frost-free season (32 degrees F): 50 to 80 days
Rock fragments on surface: Boulders and stones cover 1 to 3 percent

Map Unit Characteristics

Typical profile:
Organic mat on surface—5 inches thick
0 to 4 inches—light gray and dark reddish brown bouldery fine sandy loam (surface layer when mixed)
4 to 7 inches—strong brown and reddish brown gravelly fine sandy loam (upper part of subsoil)
7 to 18 inches—strong brown and brownish yellow gravelly sandy loam (middle part of subsoil)
18 to 36 inches—yellowish brown and pale yellow very gravelly loamy coarse sand (lower part of subsoil)
36 to 40 inches—light gray cemented glacial till
Depth class: Moderately deep to cemented glacial till
Drainage class: Moderately well drained
Permeability: Moderate in upper 36 inches and very slow below this depth
Available water capacity: Moderate
Seasonal high water table: Present in November through July (1.5 to 3.0 feet)

Contrasting Inclusions

- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

61—Chinkmin-Altapeak association, 3 to 30 percent slopes*

Composition

Chinkmin and similar soils—40 percent
Altapeak and similar soils—30 percent
Contrasting inclusions—30 percent

Map Unit Characteristics

Position on landscape: Chinkmin—toeslopes and valley bottoms; Altapeak—backslopes of mountains
Parent material: Chinkmin—volcanic ash mixed with colluvium over cemented glacial till; Altapeak—volcanic ash mixed with colluvium over granodiorite
Slope range: 3 to 30 percent
Elevation: 3,200 to 5,000 feet
Average annual precipitation: 80 to 100 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: Chinkmin—39 to 41 degrees F (cryic); Altapeak—40 to 42 degrees F (cryic)
Growing season (28 degrees F): Chinkmin—90 to 110 days; Altapeak—100 to 130 days
Frost-free season (32 degrees F): Chinkmin—50 to 80 days; Altapeak—60 to 90 days
Rock fragments on surface: Chinkmin—boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile of Chinkmin:
Organic mat on surface—5 inches thick
0 to 4 inches—light gray and dark reddish brown bouldery fine sandy loam (surface layer when mixed)
4 to 7 inches—strong brown and reddish brown gravelly fine sandy loam (upper part of subsoil)
7 to 18 inches—strong brown and brownish yellow gravelly sandy loam (middle part of subsoil)
18 to 36 inches—yellowish brown and pale yellow very gravelly loamy coarse sand (lower part of subsoil)
36 to 40 inches—light gray cemented glacial till

Typical profile of Altapeak:
Organic mat on surface—4 inches thick
0 to 6 inches—brown and dark brown gravelly sandy loam (surface layer when mixed)
6 to 26 inches—brown very gravelly loamy sand (subsoil)
26 to 48 inches—yellowish brown and light olive brown very cobbly loamy sand (substratum)
48 to 58 inches—weathered granodiorite

Depth class: Chinkmin—moderately deep to glacial till; Altapeak—deep
Drainage class: Chinkmin—moderately well drained; Altapeak—well drained
Permeability: Chinkmin—moderate in the upper 36 inches and very slow below this depth; Altapeak—moderately rapid in the upper 66 inches and rapid below this depth
Available water capacity: Chinkmin—moderate; Altapeak—low
Seasonal high water table: Chinkmin—present in November through July (1.5 to 3.0 feet)

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that consist of angular rock fragments (Reggad)

Operability Considerations

Chinkmin
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

Altapeak
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

62—Chinkmin-Altapeak association, 30 to 60 percent slopes*

Composition

Chinkmin and similar soils—40 percent
Altapeak and similar soils—30 percent
Contrasting inclusions—30 percent

Map Unit Characteristics

Position on landscape: Chinkmin—toeslopes and valley bottoms; Altapeak—backslopes of mountains
Parent material: Chinkmin—volcanic ash mixed with colluvium over cemented glacial till; Altapeak—volcanic ash mixed with colluvium over granodiorite

Slope range: 30 to 60 percent
Elevation: 3,200 to 5,000 feet
Average annual precipitation: 80 to 100 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: Chinkmin—39 to 41 degrees F (cryic); Altapeak—40 to 42 degrees F (cryic)
Growing season (28 degrees F): Chinkmin—90 to 110 days; Altapeak—100 to 130 days
Frost-free season (32 degrees F): Chinkmin—50 to 80 days; Altapeak—60 to 90 days
Rock fragments on surface: Chinkmin—boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile of Chinkmin:
Organic mat on surface—5 inches thick
0 to 4 inches—light gray and dark reddish brown bouldery fine sandy loam (surface layer when mixed)
4 to 7 inches—strong brown and reddish brown gravelly fine sandy loam (upper part of subsoil)
7 to 18 inches—strong brown and brownish yellow gravelly sandy loam (middle part of subsoil)
18 to 36 inches—yellowish brown and pale yellow very gravelly loamy coarse sand (lower part of subsoil)
36 to 40 inches—light gray cemented glacial till
Typical profile of Altapeak:
Organic mat on surface—4 inches thick
0 to 6 inches—brown and dark brown gravelly sandy loam (surface layer when mixed)
6 to 26 inches—brown very gravelly loamy sand (subsoil)
26 to 48 inches—yellowish brown and light olive brown very cobbly loamy sand (substratum)
48 to 58 inches—weathered granodiorite
Depth class: Chinkmin—moderately deep to glacial till; Altapeak—deep
Drainage class: Chinkmin—moderately well drained; Altapeak—well drained
Permeability: Chinkmin—moderate in the upper 36 inches and very slow below this depth; Altapeak—moderately rapid in the upper 66 inches and rapid below this depth
Available water capacity: Chinkmin—moderate; Altapeak—low
Seasonal high water table: Chinkmin—present in November through July (1.5 to 3.0 feet)

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that consist of angular rock fragments (Reggad)
- Avalanche chutes
- Rock outcrop
- Rubble land

Operability Considerations

Chinkmin
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery

Road rock: Readily available
Cut and fill slope stability: Stable

Altapeak
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

63—Chiwaukum stony sandy loam, 3 to 30 percent slopes

Composition

Chiwaukum and similar soils—90 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect and valley bottoms
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,600 to 2,900 feet
Average annual precipitation: 60 to 70 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 145 days
Frost-free season (32 degrees F): 60 to 105 days
Rock fragments on surface: Stones and boulders cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 2 inches—dark brown stony sandy loam (surface layer)
  2 to 11 inches—brown sandy loam (upper part of subsoil)
  11 to 39 inches—dark brown gravelly sandy loam and very cobbly sandy loam (lower part of subsoil)
  39 to 60 inches—grayish brown very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have an extremely gravelly coarse sand substratum (Cryomont)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)

Operability Considerations

Compaction hazard (moist): Moderate

Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

64—Chiwaukum bouldery fine sandy loam, 30 to 60 percent slopes

Composition

Chiwaukum and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 3,000 to 4,200 feet
Average annual precipitation: 55 to 70 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 145 days
Frost-free season (32 degrees F): 60 to 105 days
Rock fragments on surface: Boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 5 inches—brown bouldery fine sandy loam (surface layer when mixed)
  5 to 17 inches—brown gravelly sandy loam (upper part of subsoil)
  17 to 26 inches—yellowish brown cobbly sandy loam (lower part of subsoil)
  26 to 60 inches—light brownish gray extremely stony coarse sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

65—Chiwaukum bouldery fine sandy loam, 3 to 30 percent south slopes

Composition

Chiwaukum and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Valley bottoms that generally have a slight southerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 3,000 to 4,000 feet
Average annual precipitation: 50 to 60 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 41 to 43 degrees F (cryic)
Growing season (28 degrees F): 110 to 150 days
Frost-free season (32 degrees F): 70 to 110 days
Rock fragments on surface: Boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 10 inches—pale brown bouldery fine sandy loam (surface layer)
  10 to 38 inches—brown gravelly fine sandy loam (subsoil)
  38 to 60 inches—gray very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches and have a warmer temperature regime (Mountaineer)
- Soils that have an extremely gravelly coarse sand substratum (Cryomont)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

66—Chiwaukum very bouldery fine sandy loam, 8 to 30 percent slopes

Composition

Chiwaukum and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 8 to 30 percent
Elevation: 3,500 to 4,700 feet
Average annual precipitation: 50 to 70 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 145 days
Frost-free season (32 degrees F): 60 to 105 days
Rock fragments on surface: Boulders cover 3 to 15 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 2 inches—light gray very bouldery fine sandy loam (surface layer)
2 to 15 inches—strong brown gravelly fine sandy loam (upper part of subsoil)
15 to 24 inches—brown cobbly sandy loam (lower part of subsoil)
24 to 60 inches—pinkish gray extremely stony coarse sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have an extremely gravelly coarse sand substratum (Cryomont)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

67—Chiwaukum association, 3 to 30 percent slopes*

Composition

Chiwaukum and similar soils—40 percent
Chiwaukum, south, and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Chiwaukum—mountainsides that generally have a northerly aspect and valley bottoms; Chiwaukum, south—mountainsides that generally have a southerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,600 to 4,000 feet

Average annual precipitation: Chiwaukum—60 to 70 inches; Chiwaukum, south—50 to 60 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Chiwaukum—40 to 42 degrees F (cryic); Chiwaukum, south—41 to 43 degrees F (cryic)
Growing season (28 degrees F): Chiwaukum—100 to 145 days; Chiwaukum, south—110 to 145 days
Frost-free season (32 degrees F): Chiwaukum—60 to 105 days; Chiwaukum, south—70 to 110 days
Rock fragments on surface: Chiwaukum—stones and boulders cover 1 to 2 percent; Chiwaukum, south—stones and boulders cover 1 to 3 percent

Soil Properties

Typical profile of Chiwaukum:
Organic mat on surface—0.5 inch thick
0 to 2 inches—dark brown stony sandy loam (surface layer)
2 to 11 inches—brown sandy loam (upper part of subsoil)
11 to 39 inches—dark brown gravelly sandy loam (lower part of subsoil)
39 to 60 inches—yellowish brown very cobbly sandy loam (substratum)
Typical profile of Chiwaukum, south:
Organic mat on surface—1 inch thick
0 to 10 inches—pale brown bouldery fine sandy loam (surface layer)
10 to 38 inches—brown gravelly fine sandy loam (subsoil)
38 to 60 inches—gray very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have an extremely gravelly coarse sand substratum (Cryomont)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have bedrock at a depth of 20 to 40 inches and have a warmer temperature regime (Mountaineer)
- Rock outcrop

Operability Considerations

Chiwaukum
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Chiwaukum, south
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

68—Chiwaukum association, 30 to 60 percent slopes*

Composition

Chiwaukum and similar soils—40 percent
Chiwaukum, south, and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Chiwaukum—mountainsides that generally have a northerly aspect and valley bottoms; Chiwaukum, south—mountainsides that generally have a southerly aspect
Parent material: Volcanic ash and pumice and over glacial till
Slope range: 30 to 60 percent
Elevation: 2,600 to 4,000 feet
Average annual precipitation:; Chiwaukum—60 to 70 inches; Chiwaukum, south—50 to 60 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Chiwaukum—40 to 42 degrees F (cryic); Chiwaukum, south—41 to 43 degrees F (cryic)
Growing season (28 degrees F): Chiwaukum—100 to 145 days; Chiwaukum, south—110 to 145 days
Frost-free season (32 degrees F): Chiwaukum—60 to 105 days; Chiwaukum, south—70 to 110 days
Rock fragments on surface: Chiwaukum—stones and boulders cover 1 to 2 percent; Chiwaukum, south—stones and boulders cover 1 to 3 percent

Soil Properties

Typical profile of Chiwaukum:
  Organic mat on surface—0.5 inch thick
  0 to 2 inches—dark brown stony sandy loam (surface layer)
  2 to 11 inches—brown sandy loam (upper part of subsoil)
  11 to 39 inches—dark brown gravelly sandy loam (lower part of subsoil)
  39 to 60 inches—yellowish brown very cobbly sandy loam (substratum)
Typical profile of Chiwaukum, south:
  Organic mat on surface—1 inch thick
  0 to 10 inches—pale brown bouldery fine sandy loam (surface layer)
  10 to 38 inches—brown gravelly fine sandy loam (subsoil)
  38 to 60 inches—gray very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have an extremely gravelly coarse sand substratum (Cryomont)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have bedrock at a depth of 20 to 40 inches and have a warmer temperature regime (Mountaineer)
- Rock outcrop

Operability Considerations

Chiwaukum
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight

Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Chiwaukum, south
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

69—Chiwawa cindery fine sandy loam, 0 to 3 percent slopes

Composition

Chiwawa and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces near rivers and streams
Parent material: Volcanic ash and pumice over glacial outwash
Slope range: 0 to 3 percent
Elevation: 1,700 to 2,500 feet
Average annual precipitation: 25 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 2 inches—grayish brown cindery fine sandy loam (surface layer)
2 to 26 inches—brown and pale brown cindery fine sandy loam (subsoil)
26 to 42 inches—pale brown cindery fine sandy loam (upper part of substratum)
42 to 60 inches—multicolored extremely gravelly coarse sand (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 42 inches and very rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that are 90 to 100 percent pumice in the lower part of the subsoil (Bigcreek and Choralmont)
- Soils that are very gravelly loamy sand at a depth of 10 to 20 inches (Kladnick)
- Soils that are very cobbly loamy sand below the surface layer (Mippon)
- Soils that have more clay in the subsoil (Nard)
- Soils that have volcanic ash 18 to 24 inches thick over compact glacial till (Natapoc)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Stable

70—Choralmont association, 30 to 60 percent slopes*

Composition

Choralmont, till substratum, and similar soils—40 percent
Choralmont and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Choralmont, till substratum—volcanic ash and pumice over glacial till; Choralmont—volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 2,200 to 5,900 feet
Average annual precipitation: Choralmont, till substratum—35 to 50 inches; Choralmont—35 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile of Choralmont, till substratum:
Organic mat on surface—1.5 inches thick
0 to 9 inches—light gray cindery sandy loam (surface layer when mixed)
9 to 17 inches—very pale brown very cindery sandy loam (upper part of subsoil)
17 to 33 inches—light yellowish brown and very pale brown very cindery loamy sand (lower part of subsoil)
33 to 48 inches—yellow and white cinders (upper part of substratum)
48 to 60 inches—light gray loamy sand and fine sandy loam (lower part of substratum)
Typical profile of Choralmont:
0 to 5 inches—pale brown cindery sandy loam (surface layer)
5 to 11 inches—light yellowish brown cindery sandy loam (upper part of subsoil)
11 to 17 inches—pale brown very cindery sandy loam (middle part of subsoil)
17 to 42 inches—yellow and very pale brown cinders (lower part of subsoil)
42 to 60 inches—white cinders (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Choralmont, till substratum—moderate in the upper 33 inches and very rapid to moderate below this depth; Choralmont—moderate in the upper 17 inches and very rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that are extremely stony coarse sandy loam between depths of 26 and 60 inches (Chiwaukum)
- Soils that are extremely cobbly very fine sandy loam between depths of 38 and 46 inches (Tillmont)
- Soils that are extremely stony sandy loam between depths of 27 and 60 inches and have a colder temperature regime (Vabbing)
- Soils that are extremely gravelly loamy sand between depths of 22 and 44 inches (Limking)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

71—Choralmont cindery sandy loam, 3 to 30 percent slopes

Composition

Choralmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Footslopes, ridges, and backslopes of mountains
Parent material: Volcanic ash and pumice
Slope range: 3 to 30 percent
Elevation: 2,000 to 4,500 feet
Average annual precipitation: 35 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
0 to 5 inches—pale brown cindery sandy loam (surface layer)
5 to 11 inches—light yellowish brown cindery sandy loam (upper part of subsoil)
11 to 17 inches—pale brown very cindery sandy loam (middle part of subsoil)
17 to 42 inches—yellow and very pale brown cinders (lower part of subsoil)
42 to 60 inches—white cinders (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 17 inches and very rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have a colder temperature regime (Wedge)
- Soils that have more rock fragments in the subsoil (Limking)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

72—Choralmont cindery sandy loam, 30 to 60 percent slopes

Composition

Choralmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 2,000 to 4,500 feet
Average annual precipitation: 35 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
  0 to 5 inches—pale brown cindery sandy loam (surface layer)
  5 to 11 inches—light yellowish brown cindery sandy loam (upper part of subsoil)
  11 to 17 inches—pale brown very cindery sandy loam (middle part of subsoil)
  17 to 42 inches—yellow and very pale brown cinders (lower part of subsoil)
  42 to 60 inches—white cinders (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 17 inches and very rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have a colder temperature regime (Wedge)
- Soils that have more rock fragments in the subsoil (Limking)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Slight

Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

73—Choralmont cindery sandy loam, till substratum, 3 to 30 percent slopes

Composition

Choralmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Toeslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,000 to 4,500 feet
Average annual precipitation: 40 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—1.5 inches thick
0 to 9 inches—light gray cindery sandy loam (surface layer when mixed)
9 to 17 inches—very pale brown and light yellowish brown very cindery sandy loam (upper part of subsoil)
17 to 33 inches—light yellowish brown and very pale brown very cindery loamy sand (lower part of subsoil)
33 to 48 inches—yellow and white cinders (upper part of substratum)
48 to 60 inches—light gray loamy sand and fine sandy loam (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 17 inches and very rapid to moderate below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that are extremely gravelly sand between depths of 38 and 60 inches (Bigcreek)
- Soils that are extremely stony coarse sandy loam between depths of 26 and 60 inches (Chiwaukum)
- Soils that are extremely cobbly sand between depths of 21 and 60 inches (Kladnick)
- Soils that are extremely stony sandy loam between depths of 27 and 60 inches and have a colder temperature regime (Vabbing)

Operability Considerations

Compaction hazard (moist): Severe

Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

74—Choralmont cindery sandy loam, till substratum, 30 to 60 percent slopes

Composition

Choralmont and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,200 to 5,900 feet
Average annual precipitation: 35 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—1.5 inches thick
0 to 9 inches—light gray cindery sandy loam (surface layer when mixed)
9 to 17 inches—very pale brown and light yellowish brown very cindery sandy loam (upper part of subsoil)
17 to 33 inches—light yellowish brown and very pale brown very cindery loamy sand (lower part of subsoil)
33 to 48 inches—yellow and white cinders (upper part of substratum)
48 to 60 inches—light gray loamy sand and fine sandy loam (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 17 inches and very rapid to moderate below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that are extremely stony coarse sandy loam between depths of 26 and 60 inches (Chiwaukum)
- Soils that are extremely cobbly sand between depths of 21 and 60 inches (Kladnick)
- Soils that are extremely cobbly very fine sandy loam between depths of 38 and 46 inches (Tillmont)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe

Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

75—Choralmont-Limking complex, 30 to 60 percent slopes

Composition

Choralmont and similar soils—50 percent
Limking and similar soils—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Choralmont—volcanic ash and pumice; Limking—volcanic ash and pumice mixed with colluvium derived from granite
Slope range: 30 to 60 percent
Elevation: 2,000 to 4,500 feet
Average annual precipitation: 35 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Limking—stones cover 1 to 3 percent

Soil Properties

Typical profile of Choralmont:
  0 to 5 inches—pale brown cindery sandy loam (surface layer)
  5 to 11 inches—light yellowish brown cindery sandy loam (upper part of subsoil)
  11 to 17 inches—pale brown very cindery sandy loam (middle part of subsoil)
  17 to 42 inches—yellow and very pale brown cinders (lower part of subsoil)
  42 to 60 inches—white cinders (substratum)
Typical profile of Limking:
  Organic mat on surface—1 inch thick
  0 to 4 inches—brown stony loam (surface layer)
  4 to 15 inches—light yellowish brown very stony sandy loam (upper part of subsoil)
  15 to 38 inches—pale brown very cobbly loamy sand (lower part of subsoil)
  38 to 55 inches—brownish yellow very gravelly loamy sand (substratum)
  55 to 59 inches—unweathered granodiorite
Depth class: Choralmont—very deep; Limking—deep
Drainage class: Well drained
Permeability: Choralmont—moderate in the upper 17 inches and very rapid below this depth; Limking—moderate in the upper 4 inches and moderately rapid or rapid below this depth
Available water capacity: Choralmont—high; Limking—low

Contrasting Inclusions

- Soils that have a colder temperature regime (Wedge)

- Rock outcrop
- Rubble land

Operability Considerations

Choralmont
Compaction hazard (moist): Severe
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

Limking
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

76—Chumstick stony sandy loam, 3 to 30 percent slopes

Composition

Chumstick and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Toeslopes of mountainsides that generally have a southerly aspect
Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash and loess
Slope range: 3 to 30 percent
Elevation: 3,200 to 5,200 feet
Average annual precipitation: 24 to 32 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 4 inches—brown stony sandy loam (surface layer)
4 to 14 inches—brown very stony sandy loam (upper part of subsoil)
14 to 19 inches—brown extremely stony sandy loam (lower part of subsoil)
19 to 23 inches—fractured unweathered schist
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low

Contrasting Inclusions

- Soils that receive less rainfall (Swakane)
- Soils that have a dark surface layer less than 14 inches thick and have bedrock at a depth of 40 to 60 inches (Inkler)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

77—Chumstick stony sandy loam, 30 to 60 percent slopes

Composition

Chumstick and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a southerly aspect
Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 3,200 to 5,200 feet
Average annual precipitation: 24 to 32 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 4 inches—brown stony sandy loam (surface layer)
4 to 14 inches—brown very stony sandy loam (upper part of subsoil)
14 to 19 inches—brown extremely stony sandy loam (lower part of subsoil)
19 to 23 inches—fractured unweathered schist
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low

Contrasting Inclusions

- Soils that receive less rainfall (Swakane)
- Soils that have a dark surface layer less than 14 inches thick and have bedrock at a depth of 40 to 60 inches (Inkler and Ardenvoir)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Hazard of soil damage by fire: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

78—Chumstick stony sandy loam, 60 to 90 percent slopes

Composition

Chumstick and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a southerly aspect
Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash and loess
Slope range: 60 to 90 percent
Elevation: 3,000 to 5,200 feet
Average annual precipitation: 24 to 32 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 4 inches—brown stony sandy loam (surface layer)
4 to 14 inches—brown very stony sandy loam (upper part of subsoil)
14 to 19 inches—brown extremely stony sandy loam (lower part of subsoil)
19 inches—fractured unweathered schist
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low

Contrasting Inclusions

- Soils that receive less rainfall (Swakane)
- Soils that have a dark surface layer less than 14 inches thick and have bedrock at a depth of 40 to 60 inches (Inkler and Ardenvoir)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

79—Cle Elum loam, 30 to 60 percent slopes

Composition

Cle Elum and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Residuum and colluvium derived from sandstone mixed with loess and volcanic ash in the upper part
Slope range: 30 to 60 percent
Elevation: 1,000 to 3,800 feet
Average annual precipitation: 18 to 28 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 4 inches—grayish brown loam (surface layer)
  4 to 14 inches—pale brown loam (subsurface layer)
  14 to 29 inches—pale brown sandy clay loam (upper part of subsoil)
  29 to 36 inches—pale brown clay loam (lower part of subsoil)
  36 to 46 inches—weathered sandstone
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Blag)
- Soils that have a colder temperature regime and are very deep (Nard)
- Soils that have a dark surface layer more than 20 inches thick and are very deep (Yaxing)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

80—Cle Elum loam, 30 to 60 percent south slopes

Composition

Cle Elum and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a southerly aspect
Parent material: Residuum and colluvium derived from sandstone mixed with loess and volcanic ash in the upper part
Slope range: 30 to 60 percent
Elevation: 1,400 to 3,800 feet
Average annual precipitation: 18 to 28 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 200 to 220 days
Frost-free season (32 degrees F): 160 to 185 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 4 inches—grayish brown loam (surface layer)
4 to 14 inches—pale brown loam (subsurface layer)
14 to 29 inches—pale brown sandy clay loam (upper part of subsoil)
29 to 36 inches—pale brown clay loam (lower part of subsoil)
36 to 46 inches—weathered sandstone
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Blag)
- Soils that have a colder temperature regime and are very deep (Nard)
- Soils that have a dark surface layer more than 20 inches thick and are very deep (Yaxing)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

81—Coopmont fine sandy loam, 3 to 30 percent slopes

Composition

Coopmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Ridges and shoulders of mountains
Parent material: Volcanic ash and pumice over colluvium and residuum derived from granodiorite
Slope range: 3 to 30 percent
Elevation: 4,500 to 6,000 feet
Average annual precipitation: 30 to 50 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 5 inches—pale brown fine sandy loam (surface layer when mixed)
5 to 12 inches—pale brown cindery sandy loam (upper part of subsoil)
12 to 28 inches—light yellowish brown cindery loamy sand (middle part of subsoil)
28 to 50 inches—light gray and very pale brown very gravelly sandy loam (lower part of subsoil)
50 to 60 inches—very pale brown extremely gravelly sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 50 inches and very rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Fears)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

82—Coopmont fine sandy loam, 30 to 60 percent slopes

Composition

Coopmont and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over colluvium derived from granodiorite
Slope range: 30 to 60 percent
Elevation: 4,500 to 6,000 feet
Average annual precipitation: 30 to 50 inches

Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 5 inches—pale brown fine sandy loam (surface layer when mixed)
5 to 12 inches—pale brown cindery sandy loam (upper part of subsoil)
12 to 28 inches—light yellowish brown cindery loamy sand (middle part of subsoil)
28 to 50 inches—light gray and very pale brown very gravelly sandy loam (lower part of subsoil)
50 to 60 inches—very pale brown extremely gravelly sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 50 inches and very rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Fears)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

83—Cowiche complex, 3 to 25 percent slopes

Composition

Cowiche and similar soils—45 percent
Cowiche, very deep, and similar soils—40 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Foothills
Parent material: Loess over residuum derived from sandstone or schist
Slope range: 3 to 25 percent
Elevation: 1,200 to 3,500 feet
Average annual precipitation: 9 to 12 inches
Average annual air temperature: 48 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 165 to 185 days

Soil Properties

Typical profile of Cowiche:
0 to 10 inches—brown silt loam (upper part of surface layer)
10 to 20 inches—brown loam (lower part of surface layer)

20 to 29 inches—brown loam (upper part of subsoil)
29 to 50 inches—yellowish brown clay loam (lower part of subsoil)
50 to 60 inches—weathered sandstone

Typical profile of Cowiche, very deep:
0 to 10 inches—brown silt loam (surface layer)
10 to 25 inches—brown loam (upper part of subsoil)
25 to 45 inches—brown clay loam (lower part of subsoil)
45 to 60 inches—yellowish brown sandy loam (substratum)

Depth class: Cowiche—deep; Cowiche, very deep—very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Bjork)
- Soils that have bedrock at a depth of 10 to 20 inches (Borland)

Development Limitations

Corrosivity: Uncoated steel—high; concrete—low
Fences: Moderate—slope
Pipelines: Moderate—slope
Livestock ponds: Severe—slope
Seeding: Moderate—slope
Brush control: Moderate—slope

84—Cowiche complex, 25 to 70 percent slopes

Composition

Cowiche and similar soils—50 percent
Cowiche, very deep, and similar soils—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Foothills
Parent material: Loess over residuum derived from sandstone or schist
Slope range: 25 to 70 percent
Elevation: 1,400 to 4,800 feet
Average annual precipitation: 9 to 12 inches
Average annual air temperature: 48 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 165 to 185 days

Soil Properties

Typical profile of Cowiche:
0 to 10 inches—brown silt loam (upper part of surface layer)
10 to 20 inches—brown loam (lower part of surface layer)
20 to 29 inches—brown loam (upper part of subsoil)
29 to 50 inches—yellowish brown clay loam (lower part of subsoil)
50 to 60 inches—weathered sandstone

Typical profile of Cowiche, very deep:
0 to 10 inches—brown silt loam (surface layer)
10 to 25 inches—brown loam (upper part of subsoil)
25 to 45 inches—brown clay loam (lower part of subsoil)
45 to 60 inches—yellowish brown sandy loam (substratum)

Depth class: Cowiche—deep; Cowiche, very deep—very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Bjork)
- Soils that have bedrock at a depth of 10 to 20 inches (Borland)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—high; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

85—Cryomont stony fine sandy loam, 0 to 5 percent slopes

Composition

Cryomont and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Flood plains
Parent material: Alluvium
Slope range: 0 to 5 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 35 to 75 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Stones and boulders cover 3 to 5 percent

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 5 inches—grayish brown stony fine sandy loam (surface layer)
  5 to 12 inches—light brownish gray very gravelly loamy sand (subsoil)
  12 to 60 inches—multicolored extremely gravelly coarse sand (substratum)
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate in the upper 5 inches and rapid or very rapid below this depth
Available water capacity: Low
Frequency of flooding: Frequent, brief periods in December through April

Contrasting Inclusions

- Soils that have volcanic ash and pumice in the subsoil (Line)
- Soils that have an extremely stony sandy loam substratum (Vabbing)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Stable

86—Cryomont stony fine sandy loam, 5 to 30 percent slopes

Composition

Cryomont and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Alluvial fans
Parent material: Alluvium
Slope range: 5 to 30 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 35 to 75 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Stones and boulders cover 3 to 5 percent

Soil Properties

Typical profile:
0 to 4 inches—grayish brown stony fine sandy loam (surface layer)
4 to 12 inches—light brownish gray very gravelly loamy sand (subsoil)
12 to 60 inches—multicolored extremely gravelly coarse sand (substratum)
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate in the upper 4 inches and rapid or very rapid below this depth
Available water capacity: Low
Frequency of flooding: Rare in March through June

Contrasting Inclusions

- Soils that have volcanic ash and pumice in the subsoil (Line)
- Soils that have an extremely stony sandy loam substratum (Vabbing)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery

Road rock: Not available
Cut and fill slope stability: Slump

87—Cryomont association, 0 to 30 percent slopes*

Composition

Cryomont and similar soils—40 percent
Cryomont, fan, and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Cryomont—flood plains; Cryomont, fan—alluvial fans
Parent material: Alluvium
Slope range: Cryomont—0 to 5 percent; Cryomont, fan—5 to 30 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 35 to 75 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Stones and boulders cover 3 to 5 percent

Soil Properties

Typical profile of Cryomont:
  Organic mat on surface—0.5 inch thick
  0 to 5 inches—grayish brown stony fine sandy loam (surface layer)
  5 to 12 inches—light brownish gray very gravelly loamy sand (subsoil)
  12 to 60 inches—multicolored extremely gravelly coarse sand (substratum)
Typical profile of Cryomont, fan:
  0 to 4 inches—grayish brown very stony fine sandy loam (surface layer)
  4 to 12 inches—light brownish gray very gravelly loamy sand (subsoil)
  12 to 60 inches—multicolored extremely gravelly coarse sand (substratum)
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate to moderately rapid in the upper 12 inches and very rapid below this depth
Available water capacity: Low
Frequency of flooding: Cryomont—frequent, brief periods in December through April; Cryomont, fan—rare in March through June

Contrasting Inclusions

- Soils that have volcanic ash and pumice in the subsoil (Line)
- Soils that have an extremely stony sandy loam substratum (Vabbing)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Stable

88—Culving-Rock outcrop complex, 30 to 60 percent slopes

Composition

Culving and similar soils—65 percent
Rock outcrop—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly, easterly, or westerly aspect
Parent material: Colluvium and residuum derived from serpentine mixed with a small amount of volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,400 to 5,000 feet
Average annual precipitation: 27 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 135 to 170 days
Frost-free season (32 degrees F): 75 to 125 days

Soil Properties

Typical profile of Culving:
Organic mat on surface—0.5 inch thick
0 to 4 inches—brown gravelly loam (surface layer)
4 to 8 inches—pale brown very gravelly loam (upper part of subsoil)
8 to 21 inches—light olive brown very gravelly loam (lower part of subsoil)
21 to 25 inches—unweathered serpentine
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Rock Outcrop

Kind of rock: Serpentine and greenstone

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches and have a colder temperature regime (Culvop)
- Soils that have more clay in the subsoil and are very deep (Kingmont)

Operability Considerations

Culving
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

89—Culvop very gravelly loam, 30 to 60 percent slopes

Composition

Culvop and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Colluvium and residuum derived from serpentine mixed with volcanic ash
Slope range: 30 to 60 percent
Elevation: 5,000 to 6,800 feet
Average annual precipitation: 35 to 50 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 10 inches—light yellowish brown very gravelly loam (upper part of subsoil when mixed)
10 to 16 inches—yellowish brown very gravelly loam (lower part of subsoil)
16 to 20 inches—unweathered serpentine
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Contrasting Inclusions

- Soils that are very deep and receive more rainfall (Esmeralda)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

90—Devore-Rock outcrop complex, 50 to 75 percent slopes

Composition

Devore and similar soils—60 percent
Rock outcrop—15 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a southerly aspect
Parent material: Residuum and colluvium derived from metamorphic and igneous rock mixed with volcanic ash
Slope range: 50 to 75 percent
Elevation: 4,200 to 7,200 feet
Average annual precipitation: 40 to 50 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 90 to 110 days
Frost-free season (32 degrees F): 50 to 80 days
Rock fragments on surface: Stones cover 5 to 15 percent

Soil Properties

Typical profile of Devore:
Organic mat on surface—0.5 inch thick
0 to 2 inches—light brownish gray stony fine sandy loam (surface layer)
2 to 8 inches—light yellowish brown very stony sandy loam (subsoil)
8 to 25 inches—very pale brown very stony and extremely stony sandy loam (substratum)
25 to 29 inches—fractured unweathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Rock Outcrop

Kind of rock: Granodiorite, gneiss, and schist

Contrasting Inclusions

- Soils that are very deep (Fears)
- Soils that are volcanic ash and pumice throughout (Wedge)
- Soils that have an extremely cindery sandy loam subsoil (Wedgemont)
- Rubble land

Operability Considerations

Devore
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

91—Dinkelman gravelly sandy loam, 30 to 60 percent slopes

Composition

Dinkelman and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Colluvium and residuum derived from granodiorite mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 1,800 to 3,000 feet
Average annual precipitation: 15 to 20 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 46 degrees F (frigid)
Growing season (28 degrees F): 120 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 15 inches—grayish brown gravelly sandy loam (surface layer)
15 to 42 inches—light yellowish brown gravelly sandy loam (subsoil)
42 to 52 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a warmer temperature regime and receive less rainfall (Dinkels)
- Soils that are volcanic ash and pumice in the subsoil (Domkey)
- Soils that have bedrock at a depth of 20 to 40 inches (Switchback)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that are volcanic ash and pumice in the upper part of the subsoil (Palmich)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

92—Dinkelman gravelly sandy loam, 60 to 90 percent slopes

Composition

Dinkelman and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Colluvium and residuum derived from granodiorite mixed with volcanic ash and loess

Slope range: 60 to 90 percent
Elevation: 1,800 to 3,000 feet
Average annual precipitation: 15 to 20 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 46 degrees F (frigid)
Growing season (28 degrees F): 120 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
  Organic mat on surface—2 inches thick
  0 to 15 inches—grayish brown gravelly sandy loam (surface layer)
  15 to 42 inches—light yellowish brown gravelly sandy loam (subsoil)
  42 to 52 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a warmer temperature regime and receive less rainfall (Dinkels)
- Soils that are volcanic ash and pumice in the subsoil (Domkey)
- Soils that have bedrock at a depth of 20 to 40 inches (Switchback)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

93—Dinkelman-Rock outcrop complex, 30 to 90 percent slopes

Composition

Dinkelman and similar soils—55 percent
Rock outcrop—25 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Colluvium and residuum derived from granodiorite mixed with volcanic ash and loess
Slope range: 30 to 90 percent
Elevation: 1,800 to 3,000 feet
Average annual precipitation: 15 to 20 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 46 degrees F (frigid)

Growing season (28 degrees F): 120 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile of Dinkelman:
Organic mat on surface—2 inches thick
0 to 15 inches—grayish brown gravelly sandy loam (surface layer)
15 to 42 inches—light yellowish brown gravelly sandy loam (subsoil)
42 to 52 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 30 inches and moderately rapid below this depth
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Granodiorite and granite

Contrasting Inclusions

- Soils that have a warmer temperature regime and receive less rainfall (Dinkels)
- Soils that have volcanic ash and pumice in the subsoil (Domkey)
- Soils that have bedrock at a depth of 20 to 40 inches (Switchback)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Rock outcrop

Operability Considerations

Dinkelman
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

94—Dinkels fine sandy loam, 8 to 15 percent slopes

Composition

Dinkels and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes of plateaus
Parent material: Colluvium derived from granodiorite mixed with loess and volcanic ash
Slope range: 8 to 15 percent
Elevation: 1,500 to 2,600 feet
Average annual precipitation: 10 to 15 inches
Average annual air temperature: 46 to 48 degrees F (mesic)
Frost-free season (32 degrees F): 90 to 140 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown fine sandy loam (surface layer)

10 to 34 inches—grayish brown and pale brown sandy loam (subsoil)
34 to 56 inches—light yellowish brown sandy loam (substratum)
56 to 60 inches—unweathered granodiorite

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a colder temperature regime and receive more rainfall (Dinkelman)
- Soils that have more clay in the subsoil and have bedrock at a depth of 20 to 40 inches (Morical)
- Soils that have bedrock at a depth of 10 to 20 inches (Entiat)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Slight
Pipelines: Slight
Livestock ponds: Moderate—slope and seepage
Seeding: Slight
Brush control: Slight

95—Dinkels fine sandy loam, 15 to 30 percent slopes

Composition

Dinkels and similar soils—90 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Backslopes of plateaus and ridges that generally have a northerly aspect
Parent material: Colluvium derived from granodiorite mixed with loess and volcanic ash
Slope range: 15 to 30 percent
Elevation: 1,500 to 2,600 feet
Average annual precipitation: 10 to 15 inches
Average annual air temperature: 46 to 48 degrees F (mesic)
Frost-free season (32 degrees F): 90 to 140 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown fine sandy loam (surface layer)
10 to 34 inches—grayish brown and pale brown sandy loam (subsoil)
34 to 56 inches—light yellowish brown sandy loam (substratum)
56 to 60 inches—unweathered granodiorite

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a colder temperature regime and receive more rainfall (Dinkelman)

- Soils that have more clay in the subsoil and have bedrock at a depth of 20 to 40 inches (Morical)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Moderate—slope
Pipelines: Moderate—slope
Livestock ponds: Severe—slope
Seeding: Moderate—slope
Brush control: Moderate—slope

96—Dinkels gravelly sandy loam, 45 to 70 percent slopes

Composition

Dinkels and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Colluvium mixed with loess and volcanic ash
Slope range: 45 to 70 percent
Elevation: 1,200 to 2,600 feet
Average annual precipitation: 10 to 15 inches
Average annual air temperature: 46 to 48 degrees F (mesic)
Frost-free season (32 degrees F): 90 to 140 days

Soil Properties

Typical profile:
0 to 11 inches—grayish brown and brown gravelly sandy loam (surface layer)
11 to 22 inches—yellowish brown gravelly sandy loam (upper part of subsoil)
22 to 42 inches—light yellowish brown gravelly coarse sandy loam (lower part of subsoil)
42 to 59 inches—pale brown gravelly coarse sandy loam (substratum)
59 to 63 inches—unweathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a colder temperature regime and receive more rainfall (Dinkelman)
- Soils that have bedrock at a depth of 10 to 20 inches (Entiat)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope

Seeding: Severe—slope
Brush control: Severe—slope

97—Domkey sandy loam, 5 to 30 percent slopes

Composition

Domkey and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over weathered granodiorite
Slope range: 5 to 30 percent
Elevation: 2,500 to 3,500 feet
Average annual precipitation: 18 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 10 inches—pale brown sandy loam (surface layer when mixed)
10 to 18 inches—light brownish gray gravelly sandy loam (upper part of subsoil)
18 to 35 inches—pale brown gravelly coarse sandy loam (lower part of subsoil)
35 to 45 inches—light yellowish brown very gravelly loamy coarse sand (substratum)
45 to 55 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 35 inches and moderately rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Switchback)
- Soils that have more rock fragments in the subsoil (McCree)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

98—Domkey sandy loam, 30 to 60 percent slopes

Composition

Domkey and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over weathered granodiorite
Slope range: 30 to 60 percent
Elevation: 2,500 to 3,500 feet
Average annual precipitation: 18 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 10 inches—pale brown sandy loam (surface layer when mixed)
  10 to 18 inches—light brownish gray gravelly sandy loam (upper part of subsoil)
  18 to 35 inches—pale brown gravelly coarse sandy loam (lower part of subsoil)
  35 to 45 inches—light yellowish brown very gravelly loamy coarse sand (substratum)
  45 to 55 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 35 inches and moderately rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Switchback)
- Soils that have more rock fragments in the subsoil (McCree)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

99—Domkey-McCree complex, 30 to 60 percent slopes

Composition

Domkey and similar soils—40 percent
McCree and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Domkey—mountainsides that generally have a northerly aspect; McCree—mountainsides
Parent material: Domkey—volcanic ash and pumice over weathered granodiorite; McCree—colluvium derived from granodiorite mixed with volcanic ash and pumice
Slope range: 30 to 60 percent

Elevation: 3,000 to 4,500 feet
Average annual precipitation: 20 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: McCree—stones cover 1 to 3 percent

Soil Properties

Typical profile of Domkey:
Organic mat on surface—1 inch thick
0 to 10 inches—pale brown sandy loam (surface layer when mixed)
10 to 18 inches—light brownish gray gravelly sandy loam (upper part of subsoil)
18 to 35 inches—pale brown gravelly coarse sandy loam (lower part of subsoil)
35 to 45 inches—light yellowish brown very gravelly loamy coarse sand (substratum)
45 to 55 inches—weathered granodiorite
Typical profile of McCree:
Organic mat on surface—1 inch thick
0 to 5 inches—light brownish gray stony fine sandy loam (surface layer when mixed)
5 to 19 inches—very pale brown very stony fine sandy loam (subsoil)
19 to 36 inches—very pale brown extremely stony sandy loam (upper part of substratum)
36 to 56 inches—yellow extremely stony sandy loam (lower part of substratum)
56 to 60 inches—fractured unweathered rhyolite
Depth class: Deep
Drainage class: Well drained
Permeability: Domkey—moderate in the upper 35 inches and moderately rapid below this depth; McCree—moderate
Available water capacity: Domkey—moderate; McCree—low

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Switchback)
- Rock outcrop

Operability Considerations

Domkey
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

McCree
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

100—Dragoon fine sandy loam, 30 to 60 percent slopes

Composition

Dragoon and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Residuum and colluvium derived from granite mixed with volcanic ash and loess in the upper part
Slope range: 30 to 60 percent
Elevation: 2,200 to 3,000 feet
Average annual precipitation: 16 to 18 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 46 to 48 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 140 days

Soil Properties

Typical profile:
0 to 8 inches—grayish brown fine sandy loam (surface layer)
8 to 16 inches—pale brown loam (upper part of subsoil)
16 to 24 inches—light brownish gray loam (lower part of subsoil)
24 to 34 inches—weathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that support grassland vegetation and do not support trees (Morical)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have a cindery fine sandy loam subsoil (Bisping)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

101—Dragoon loam, 30 to 60 percent slopes

Composition

Dragoon and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that commonly have a southerly aspect

Parent material: Colluvium derived from granitic rock mixed with loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,200 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 49 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 130 days

Soil Properties

Typical profile:
  0 to 10 inches—brown loam (surface layer)
  10 to 27 inches—brown and light brownish gray loam (subsoil)
  27 to 37 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that support grassland vegetation and do not support trees (Morical)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

102—Entiat gravelly fine sandy loam, 30 to 75 percent slopes

Composition

Entiat and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that commonly have a southerly aspect
Parent material: Residuum and colluvium derived from granodiorite and gneiss mixed with volcanic ash and loess
Slope range: 30 to 75 percent
Elevation: 1,800 to 2,500 feet
Average annual precipitation: 10 to 14 inches
Average annual air temperature: 50 to 53 degrees F (mesic)
Frost-free season (32 degrees F): 135 to 165 days

Soil Properties

Typical profile:
0 to 4 inches—brown gravelly fine sandy loam (surface layer)
4 to 10 inches—brown very gravelly sandy loam (subsurface layer)
10 to 15 inches—yellowish brown very gravelly sandy loam (subsoil)
15 to 25 inches—weathered gneiss
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil and are very deep (Dinkels)
- Soils that have more clay in the subsoil and have bedrock at a depth of 40 to 60 inches (Georgecreek)
- Soils that have less rock fragments in the subsoil and have bedrock at a depth of 20 to 40 inches (Safety)
- Rock outcrop
- Rubble land

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

103—Entiat-Rock outcrop complex, 30 to 75 percent slopes

Composition

Entiat and similar soils—60 percent
Rock outcrop—25 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that commonly have a southerly aspect
Parent material: Residuum and colluvium derived from granodiorite and gneiss mixed with volcanic ash and loess
Slope range: 30 to 75 percent
Elevation: 1,800 to 2,500 feet
Average annual precipitation: 10 to 14 inches
Average annual air temperature: 50 to 53 degrees F (mesic)
Frost-free season (32 degrees F): 135 to 165 days

Soil Properties

Typical profile of Entiat:
0 to 4 inches—brown gravelly fine sandy loam (surface layer)
4 to 10 inches—brown very gravelly sandy loam (subsurface layer)

10 to 15 inches—yellowish brown very gravelly sandy loam (subsoil)
15 to 25 inches—weathered gneiss
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low

Rock Outcrop

Kind of rock: Granodiorite and gneiss

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil and are very deep (Dinkels)
- Soils that have less rock fragments in the subsoil and have bedrock at a depth of 20 to 40 inches (Safety)
- Rubble land

Development Limitations

Entiat
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—rock outcrop and slope

104—Entic Haplumbrepts, 30 to 75 percent slopes

Composition

Entic Haplumbrepts and similar soils—90 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Avalanche chutes on mountainsides and fans
Parent material: Recent alluvium and colluvium
Slope range: 30 to 75 percent
Elevation: 2,200 to 5,000 feet
Average annual precipitation: 40 to 65 inches
Average annual air temperature: 42 to 44 degrees F (frigid)
Frost-free season (32 degrees F): 80 to 130 days
Rock fragments on surface: Boulders and stones cover 3 to 5 percent

Soil Properties

Reference profile:
0 to 3 inches—very dark grayish brown very cobbly sandy loam (surface layer)
3 to 19 inches—brown extremely stony sandy loam (subsurface layer)
19 to 60 inches—multicolored extremely stony coarse sand (substratum)
Depth class: Moderately deep to very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate in the upper 19 inches and very rapid below this depth
Available water capacity: Very low

Contrasting Inclusions

- Soils that have an extremely cobbly sandy loam substratum (Icicle)

- Soils that have glacial till at a depth of 18 to 60 inches (Saska)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

105—Esmeralda bouldery sandy loam, 30 to 60 percent slopes

Composition

Esmeralda and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Residuum and colluvium derived from serpentine mixed with volcanic ash
Slope range: 30 to 60 percent
Elevation: 4,200 to 5,800 feet
Average annual precipitation: 55 to 65 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 38 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Boulders and stones cover 1 to 2 percent

Soil Properties

Typical profile:
  Organic mat on surface—4 inches thick
  0 to 4 inches—light brownish gray bouldery sandy loam (surface layer)
  4 to 6 inches—brown cobbly sandy loam (subsurface layer)
  6 to 12 inches—reddish yellow cobbly loam (upper part of subsoil)
  12 to 23 inches—yellowish brown very cobbly loam (middle part of subsoil)
  23 to 35 inches—brown very cobbly sandy loam (lower part of subsoil)
  35 to 60 inches—grayish brown extremely cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 35 inches and rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Culvop)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

106—Esmeralda-Rock outcrop complex, 30 to 75 percent slopes

Composition

Esmeralda and similar soils—45 percent
Rock outcrop—35 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Residuum and colluvium derived from serpentine mixed with volcanic ash
Slope range: 30 to 75 percent
Elevation: 4,200 to 6,300 feet
Average annual precipitation: 55 to 75 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 38 to 40 degrees F (cryic)
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Boulders and stones cover 1 to 2 percent

Soil Properties

Typical profile of Esmeralda:
  Organic mat on surface—4 inches thick
  0 to 4 inches—light brownish gray bouldery sandy loam (surface layer)
  4 to 6 inches—brown cobbly sandy loam (subsurface layer)
  6 to 12 inches—reddish yellow cobbly loam (upper part of subsoil)
  12 to 23 inches—yellowish brown very cobbly loam (middle part of subsoil)
  23 to 35 inches—brown very cobbly sandy loam (lower part of subsoil)
  35 to 60 inches—grayish brown extremely cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 35 inches and rapid below this depth
Available water capacity: Moderate

Rock Outcrop

Kind of rock: Gabbro, serpentine, greenstone, and serpentinitic basalt

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Culvop)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop

Operability Considerations

Esmeralda
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

107—Fears stony fine sandy loam, 30 to 60 percent slopes

Composition

Fears and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice mixed with colluvium derived from granite
Slope range: 30 to 60 percent
Elevation: 4,800 to 6,900 feet
Average annual precipitation: 35 to 55 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 2 inches—gray stony fine sandy loam (surface layer when mixed)
  2 to 10 inches—brown and yellowish brown cobbly fine sandy loam (upper part of subsoil)
  10 to 20 inches—brown very cobbly fine sandy loam (lower part of subsoil)
  20 to 32 inches—light yellowish brown extremely gravelly coarse sandy loam (upper part of substratum)
  32 to 60 inches—yellow extremely gravelly sandy loam (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 32 inches and moderately rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that consist of volcanic ash and pumice over bedrock at a depth of 40 to 60 inches (Goffpeak)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Soils that have volcanic ash and pumice throughout (Wedge)

Operability Considerations

Compaction hazard (moist): Moderate

Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

108—Fears-Devore association, 30 to 60 percent slopes*

Composition

Fears and similar soils—40 percent
Devore and similar soils—30 percent
Contrasting inclusions—30 percent

Map Unit Characteristics

Position on landscape: Fears—mountainsides on all aspects; Devore—mountainsides that have a southerly aspect
Parent material: Fears—volcanic ash and pumice mixed with colluvium derived from granite; Devore—residuum and colluvium mixed with volcanic ash
Slope range: 30 to 60 percent
Elevation: 4,800 to 6,900 feet
Average annual precipitation: 40 to 50 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: Fears—40 to 42 degrees F (cryic); Devore—39 to 41 degrees F (cryic)
Growing season (28 degrees F): Fears—100 to 130 days; Devore—90 to 110 days
Frost-free season (32 degrees F): Fears—60 to 90 days; Devore—50 to 80 days
Rock fragments on surface: Fears—boulders and stones cover 1 to 3 percent; Devore—stones cover 5 to 15 percent

Soil Properties

Typical profile of Fears:
- Organic mat on surface—1 inch thick
- 0 to 2 inches—gray stony fine sandy loam (surface layer when mixed)
- 2 to 10 inches—brown and yellowish brown cobbly fine sandy loam (upper part of subsoil)
- 10 to 20 inches—brown very cobbly fine sandy loam (lower part of subsoil)
- 20 to 32 inches—light yellowish brown extremely gravelly coarse sandy loam (upper part of substratum)
- 32 to 60 inches—yellow extremely gravelly sandy loam (lower part of substratum)

Typical profile of Devore:
- Organic mat on surface—0.5 inch thick
- 0 to 2 inches—light brownish gray stony fine sandy loam (surface layer)
- 2 to 8 inches—light yellowish brown very stony sandy loam (subsoil)
- 8 to 25 inches—very pale brown very stony and extremely stony sandy loam (substratum)
- 25 to 29 inches—fractured unweathered granodiorite

Depth class: Fears—very deep; Devore—moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Fears—moderate; Devore—very low

Contrasting Inclusions

- Soils that are volcanic ash and pumice throughout (Wedge)
- Soils that have an extremely cindery sandy loam subsoil (Wedgemont)
- Rock outcrop
- Rubble land

Operability Considerations

Fears
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Devore
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

109—Fernow loam, 3 to 30 percent slopes

Composition

Fernow and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Glaciated valleys and mountainsides
Parent material: Volcanic ash and pumice
Slope range: 3 to 30 percent
Elevation: 3,000 to 6,000 feet
Average annual precipitation: 75 to 100 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 5 inches—reddish brown loam (surface layer when mixed)
5 to 27 inches—strong brown and very pale brown loam (subsoil)
27 to 34 inches—light yellowish brown very cindery loam (upper part of substratum)
34 to 46 inches—very pale brown extremely cindery sandy loam (middle part of substratum)
46 to 60 inches—very pale brown and white cinders (lower part of substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate and moderately rapid in the upper 46 inches and rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that have more rock fragments in the subsoil (Nimue)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

110—Fernow loam, 30 to 60 percent slopes

Composition

Fernow and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 3,000 to 6,000 feet
Average annual precipitation: 75 to 100 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 5 inches—reddish brown loam (surface layer when mixed)
5 to 27 inches—strong brown and very pale brown loam (subsoil)
27 to 34 inches—light yellowish brown very cindery loam (upper part of substratum)
34 to 46 inches—very pale brown extremely cindery sandy loam (middle part of substratum)
46 to 60 inches—very pale brown and white cinders (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate and moderately rapid in the upper 46 inches and rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that have more rock fragments in the subsoil (Nimue)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

111—Fernow-Serene association, 30 to 60 percent slopes*

Composition

Fernow and similar soils—50 percent
Serene and similar soils—25 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Fernow—mountainsides; Serene—ridgetops and mountainsides
Parent material: Fernow—volcanic ash and pumice; Serene—volcanic ash mixed with colluvium derived from granite
Slope range: 30 to 60 percent
Elevation: 3,000 to 6,000 feet
Average annual precipitation: Fernow—75 to 100 inches; Serene—70 to 120 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Fernow—40 to 42 degrees F (cryic); Serene—39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile of Fernow:
Organic mat on surface—2 inches thick
0 to 5 inches—reddish brown loam (surface layer when mixed)
5 to 27 inches—strong brown and very pale brown loam (subsoil)
27 to 34 inches—light yellowish brown very cindery loam (upper part of substratum)
34 to 46 inches—very pale brown extremely cindery sandy loam (middle part of substratum)
46 to 60 inches—very pale brown and white cinders (lower part of substratum)
Typical profile of Serene:
Organic mat on surface—2 inches thick
0 to 4 inches—brown gravelly sandy loam (surface layer when mixed)
4 to 8 inches—reddish yellow gravelly sandy loam (upper part of subsoil)

8 to 13 inches—reddish yellow cobbly sandy loam (lower part of subsoil)
13 to 24 inches—light yellowish brown very cobbly loamy coarse sand (substratum)
24 to 34 inches—weathered granodiorite

Depth class: Fernow—very deep; Serene—moderately deep
Drainage class: Well drained
Permeability: Fernow—moderate and moderately rapid in the upper 46 inches and rapid below this depth; Serene—moderate in the upper 8 inches and moderately rapid and rapid below this depth
Available water capacity: Fernow—moderately high; Serene—very low

Contrasting Inclusions

- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that have more rock fragments in the subsoil (Nimue)
- Soils that consist of angular rock fragments (Reggad)
- Rock outcrop

Operability Considerations

Fernow
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

Serene
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

112—Fluvaquents, nearly level*

Composition

Fluvaquents and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Flood plains
Parent material: Recent alluvium
Slope range: 0 to 2 percent
Elevation: 1,600 to 2,000 feet
Average annual precipitation: 25 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Reference profile:
0 to 3 inches—grayish brown, mottled silt loam (surface layer)
3 to 16 inches—light brownish gray, mottled silt loam (upper part of substratum)
16 to 29 inches—grayish brown and gray, mottled loamy fine sand and sand (middle part of substratum)
29 to 60 inches—gray, mottled, stratified sand and very fine sandy loam (lower part of substratum)
Depth class: Very deep
Drainage class: Very poorly drained and poorly drained
Permeability: Moderate and moderately rapid in the upper 23 inches and moderate to rapid below this depth
Available water capacity: Moderately high
Seasonal high water table: Present in November through June with the highest level (0.5 foot above the surface to a depth of 0.3 foot below the surface) in February through March
Frequency of flooding: Frequent, long periods in November through March
Periods of ponding: Brief in February through March

Contrasting Inclusions

- Soils that have more rock fragments in the substratum and have a colder temperature regime (Cryomont)
- Soils that have more rock fragments in the substratum (Mippon)
- Small areas of water

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Not available
Cut and fill slope stability: Stable

113—Georgecreek fine sandy loam, 3 to 15 percent slopes

Composition

Georgecreek and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ridgetops
Parent material: Residuum derived from granitic rock mixed with loess and volcanic ash in the upper part
Slope range: 3 to 15 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 15 to 20 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 150 to 190 days
Frost-free season (32 degrees F): 100 to 130 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown and brown fine sandy loam (surface layer)
10 to 18 inches—light yellowish brown sandy clay loam (upper part of subsoil)
18 to 42 inches—yellowish brown sandy clay loam (lower part of subsoil)
42 to 52 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Dragoon)
- Soils that have bedrock at a depth of 20 to 40 inches and have less clay in the subsoil (Safety)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

114—Georgecreek fine sandy loam, 15 to 30 percent slopes

Composition

Georgecreek and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ridgetops and mountainsides
Parent material: Residuum and colluvium derived from granitic rock mixed with loess and volcanic ash in the upper part
Slope range: 15 to 30 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 15 to 20 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 150 to 190 days
Frost-free season (32 degrees F): 100 to 130 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown and brown fine sandy loam (surface layer)
10 to 18 inches—light yellowish brown sandy clay loam (upper part of subsoil)
18 to 42 inches—yellowish brown sandy clay loam (lower part of subsoil)
42 to 52 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained

Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Dragoon)
- Soils that have bedrock at a depth of 20 to 40 inches and have less clay in the subsoil (Safety)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that support grassland vegetation and do not support trees (Morical)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Stable
Road rock: Readily available
Cut and fill slope stability: Slippery and sticky

115—Georgecreek fine sandy loam, 30 to 60 percent slopes

Composition

Georgecreek and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Residuum and colluvium derived from granitic rock mixed with loess and volcanic ash in the upper part
Slope range: 30 to 60 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 15 to 20 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 150 to 190 days
Frost-free season (32 degrees F): 100 to 130 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown and brown fine sandy loam (surface layer)
10 to 18 inches—light yellowish brown sandy clay loam (upper part of subsoil)
18 to 42 inches—yellowish brown sandy clay loam (lower part of subsoil)
42 to 52 inches—weathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Dragoon)
- Soils that have bedrock at a depth of 20 to 40 inches and have less clay in the subsoil (Safety)

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that support grassland vegetation and do not support trees (Morical)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Slump

116—Georgecreek-Dragoon complex, 3 to 15 percent slopes

Composition

Georgecreek and similar soils—50 percent
Dragoon and similar soils—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ridgetops
Parent material: Georgecreek—residuum derived from granitic rock mixed with loess and volcanic ash in the upper part; Dragoon—residuum derived from granite mixed with loess and volcanic ash in the upper part
Slope range: 3 to 15 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: Georgecreek—15 to 20 inches; Dragoon—16 to 18 inches
Snowpack: Georgecreek—more than 1 foot in December through March; Dragoon—more than 1 foot in December through February
Average annual air temperature: Georgecreek—45 to 47 degrees F (mesic); Dragoon—47 to 49 degrees F (mesic)
Growing season (28 degrees F): Georgecreek—150 to 190 days; Dragoon—140 to 180 days
Frost-free season (32 degrees F): Georgecreek—100 to 130 days; Dragoon—100 to 140 days

Soil Properties

Typical profile of Georgecreek:
0 to 10 inches—grayish brown and brown fine sandy loam (surface layer)
10 to 18 inches—light yellowish brown sandy clay loam (upper part of subsoil)
18 to 42 inches—yellowish brown sandy clay loam (lower part of subsoil)
42 to 52 inches—weathered granodiorite
Typical profile of Dragoon:
0 to 8 inches—grayish brown fine sandy loam (surface layer)
8 to 16 inches—pale brown loam (upper part of subsoil)
16 to 24 inches—light brownish gray loam (lower part of subsoil)
24 to 34 inches—weathered granite
Depth class: Georgecreek—deep; Dragoon—moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Georgecreek—moderately high; Dragoon—moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that support grassland vegetation and do not support trees (Morical)

Operability Considerations

Georgecreek
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

Dragoon
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

117—Georgecreek-Dragoon complex, 15 to 30 percent slopes

Composition

Georgecreek and similar soils—40 percent
Dragoon and similar soils—40 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ridgetops
Parent material: Georgecreek—residuum derived from granitic rock mixed with loess and volcanic ash in the upper part; Dragoon—residuum derived from granite mixed with loess and volcanic ash in the upper part
Slope range: 15 to 30 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: Georgecreek—15 to 20 inches; Dragoon—16 to 18 inches
Snowpack: Georgecreek—more than 1 foot in December through February; Dragoon—more than 1 foot in December through March
Average annual air temperature: Georgecreek—45 to 47 degrees F (mesic); Dragoon—47 to 49 degrees F (mesic)
Growing season (28 degrees F): Georgecreek—150 to 190 days; Dragoon—140 to 180 days
Frost-free season (32 degrees F): Georgecreek—100 to 130 days; Dragoon—100 to 140 days

Soil Properties

Typical profile of Georgecreek:
0 to 6 inches—dark brown and brown fine sandy loam (surface layer)
6 to 19 inches—light yellowish brown sandy clay loam (upper part of subsoil)

19 to 53 inches—yellowish brown sandy clay loam (lower part of subsoil)
53 to 68 inches—weathered granodiorite

Typical profile of Dragoon:
0 to 8 inches—grayish brown fine sandy loam (surface layer)
8 to 16 inches—pale brown loam (upper part of subsoil)
16 to 24 inches—light brownish gray loam (lower part of subsoil)
24 to 34 inches—weathered granite

Depth class: Georgecreek—deep; Dragoon—moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Georgecreek—moderately high; Dragoon—moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that support grassland vegetation and do not support trees (Morical)

Operability Considerations

Georgecreek
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Stable
Road rock: Readily available
Cut and fill slope stability: Slippery and sticky

Dragoon
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

118—Gilpar very stony sandy loam, 30 to 60 percent slopes

Composition

Gilpar and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Colluvium and residuum derived from metamorphic and igneous rock mixed with volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,100 to 5,500 feet
Average annual precipitation: 70 to 90 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 42 to 44 degrees F (cryic)
Growing season (28 degrees F): 130 to 170 days

Frost-free season (32 degrees F): 90 to 110 days
Rock fragments on surface: Stones cover 5 to 10 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 6 inches—pink very stony sandy loam (surface layer when mixed)
6 to 28 inches—light brown and light yellowish brown very channery sandy loam (subsoil)
28 to 60 inches—light yellowish brown very channery sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Chinkmin and Vabus)
- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

119—Gilpar-Nimue association, 30 to 60 percent slopes*

Composition

Gilpar and similar soils—40 percent
Nimue and similar soils—30 percent
Contrasting inclusions—30 percent

Map Unit Characteristics

Position on landscape: Gilpar—mountainsides that generally have a northerly aspect; Nimue—mountainsides
Parent material: Gilpar—colluvium and residuum derived from metamorphic and igneous rock mixed with volcanic ash; Nimue—colluvium derived from schist and gneiss with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,100 to 5,500 feet
Average annual precipitation: 70 to 90 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Gilpar—42 to 44 degrees F (cryic); Nimue—38 to 41 degrees F (cryic)
Growing season (28 degrees F): Gilpar—130 to 170 days; Nimue—100 to 130 days
Frost-free season (32 degrees F): Gilpar—90 to 110 days; Nimue—60 to 90 days
Rock fragments on surface: Gilpar—stones cover 5 to 10 percent

Soil Properties

Typical profile of Gilpar:
Organic mat on surface—1 inch thick
0 to 6 inches—pink very stony sandy loam (surface layer when mixed)
6 to 28 inches—light brown and light yellowish brown very channery sandy loam (subsoil)
28 to 60 inches—light yellowish brown very channery sandy loam (substratum)
Typical profile of Nimue:
Organic mat on surface—4 inches thick
0 to 7 inches—dark reddish brown and yellowish red cobbly fine sandy loam (upper part of subsoil when mixed)
7 to 14 inches—strong brown very cobbly silt loam (lower part of subsoil)
14 to 60 inches—dark brown and olive brown extremely stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Gilpar—moderately high; Nimue—moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 24 to 40 inches (Chinkmin and Vabus)
- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Rock outcrop

Operability Considerations

Gilpar
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Nimue
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

120—Gilpar-Nimue-Rock outcrop association, 45 to 90 percent slopes*

Composition

Gilpar and similar soils—35 percent
Nimue and similar soils—25 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Gilpar—mountainsides that generally have a northerly aspect; Nimue—mountainsides
Parent material: Gilpar—colluvium and residuum derived from metamorphic and igneous rock mixed with volcanic ash; Nimue—colluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 45 to 90 percent
Elevation: 3,100 to 5,500 feet
Average annual precipitation: 70 to 90 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Gilpar—42 to 44 degrees F (cryic); Nimue—38 to 41 degrees F (cryic)
Growing season (28 degrees F): Gilpar—130 to 150 days; Nimue—100 to 130 days
Frost-free season (32 degrees F): Gilpar—90 to 110 days; Nimue—60 to 90 days
Rock fragments on surface: Gilpar—stones cover 5 to 10 percent; Nimue—boulders and stones cover 2 to 3 percent

Soil Properties

Typical profile of Gilpar:
Organic mat on surface—1 inch thick
0 to 6 inches—pink very stony sandy loam (surface layer when mixed)
6 to 28 inches—light brown and light yellowish brown very channery sandy loam (subsoil)
28 to 60 inches—light yellowish brown very channery sandy loam (substratum)
Typical profile of Nimue:
Organic mat on surface—1.5 inches thick
0 to 2 inches—gray bouldery sandy loam (subsurface layer)
2 to 14 inches—strong brown very cobbly loam (subsoil)
14 to 60 inches—yellowish brown and light olive brown very cobbly fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Gilpar—moderately high; Nimue—moderate

Rock Outcrop

Kind of rock: Gneiss and schist

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Chinkmin and Vabus)
- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Rubble land

Operability Considerations

Gilpar
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Nimue
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

121—Gilpar-Rock outcrop complex, 45 to 90 percent slopes

Composition

Gilpar and similar soils—60 percent
Rock outcrop—25 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Colluvium and residuum derived from metamorphic and igneous rock mixed with volcanic ash
Slope range: 45 to 90 percent
Elevation: 2,100 to 5,500 feet
Average annual precipitation: 70 to 90 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 42 to 44 degrees F (cryic)
Growing season (28 degrees F): 130 to 150 days
Frost-free season (32 degrees F): 90 to 110 days
Rock fragments on surface: Stones cover 5 to 10 percent

Soil Properties

Typical profile of Gilpar:
  Organic mat on surface—1 inch thick
  0 to 6 inches—pink very stony sandy loam (surface layer when mixed)
  6 to 28 inches—light brown and light yellowish brown very channery sandy loam (subsoil)
  28 to 60 inches—light yellowish brown very channery sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Gneiss and schist

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Chinkmin and Vabus)
- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Rubble land

Operability Considerations

Gilpar
Compaction hazard (moist): Slight

Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

122—Glaciers, snowfields

Composition

Glaciers, snowfields, and similar inclusions—90 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: High mountaintops and mountainsides, mostly in the northwestern part of Chelan County
Parent material: Ice
Slope range: 15 to 90 percent
Elevation: 6,000 to 9,000 feet
Average annual precipitation: 70 to 160 inches
Growing season (28 degrees F): 30 to 40 days
Frost-free season (32 degrees F): 10 to 30 days

Contrasting Inclusions

- Rock outcrop
- Rubble land

123—Goffpeak cindery sandy loam, 30 to 60 percent slopes

Composition

Goffpeak and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice over granitic volcanic rock
Slope range: 30 to 60 percent
Elevation: 4,800 to 6,000 feet
Average annual precipitation: 30 to 50 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 13 inches—pale brown cindery sandy loam (surface layer when mixed)
13 to 26 inches—pale brown cindery sandy loam (subsoil)
26 to 42 inches—yellow, white, and black very cindery sandy loam (substratum)
42 to 46 inches—fractured unweathered granite

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 26 inches and rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Fears)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

124—Goffpeak-Fears association, 30 to 60 percent slopes*

Composition

Goffpeak and similar soils—40 percent
Fears and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Goffpeak—volcanic ash and pumice over granitic and volcanic rock; Fears—volcanic ash and pumice mixed with colluvium derived from granitic rock
Slope range: 30 to 60 percent
Elevation: 4,800 to 6,000 feet
Average annual precipitation: 35 to 50 inches
Snowpack: Goffpeak—more than 3 feet in December through March; Fears—more than 3 feet in November through April
Average annual air temperature: Goffpeak—39 to 41 degrees F (cryic); Fears—40 to 42 degrees F (cryic)
Growing season (28 degrees F): Goffpeak—100 to 140 days; Fears—100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Fears—stones and boulders cover 1 to 3 percent

Soil Properties

Typical profile of Goffpeak:
Organic mat on surface—0.5 inch thick
0 to 13 inches—pale brown cindery sandy loam (surface layer when mixed)
13 to 26 inches—pale brown cindery sandy loam (subsoil)
26 to 42 inches—yellow, white, and black very cindery sandy loam (substratum)
42 to 46 inches—fractured unweathered granite
Typical profile of Fears:
Organic mat on surface—1 inch thick
0 to 2 inches—gray stony fine sandy loam (surface layer when mixed)

2 to 10 inches—brown and yellowish brown cobbly fine sandy loam (upper part of subsoil)
10 to 20 inches—brown very cobbly fine sandy loam (lower part of subsoil)
20 to 32 inches—light yellowish brown extremely gravelly coarse sandy loam (upper part of substratum)
32 to 60 inches—yellow extremely gravelly sandy loam (lower part of substratum)

Depth class: Goffpeak—deep; Fears—very deep
Drainage class: Well drained
Permeability: Goffpeak—moderate in the upper 26 inches and rapid below this depth; Fears—moderate in the upper 32 inches and moderately rapid below this depth
Available water capacity: Goffpeak—moderately high; Fears—moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Rubble land

Operability Considerations

Goffpeak
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

Fears
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

125—Haplocryods complex, gently sloping to steep*

Composition

Haplocryods, cold, and similar soils—45 percent
Haplocryods, stony, and similar soils—30 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Haplocryods, cold—mountainsides and ridge crests; Haplocryods, stony—mountainsides that generally have a northerly aspect and concave relief, and cirque basins
Parent material: Haplocryods, cold—volcanic ash mixed with residuum and colluvium derived from igneous and metamorphic rock; Haplocryods, stony—volcanic ash mixed with glacial till or colluvium and residuum derived from igneous and metamorphic rock
Slope range: 8 to 45 percent
Elevation: 3,500 to 8,000 feet

Average annual precipitation: Haplocryods, cold—80 to 120 inches; Haplocryods, stony—35 to 75 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 35 to 39 degrees F (cryic)
Growing season (28 degrees F): Haplocryods, cold—60 to 80 days; Haplocryods, stony—75 to 95 days
Frost-free season (32 degrees F): Haplocryods, cold—45 to 70 days; Haplocryods, stony—30 to 65 days
Rock fragments on surface: Haplocryods, stony—stones and boulders cover 1 to 3 percent

Soil Properties

Reference profile of Haplocryods, cold:
Organic mat on surface—1.5 inches thick
0 to 4 inches—brown silt loam (surface layer)
4 to 10 inches—yellowish brown silt loam (upper part of subsoil)
10 to 15 inches—brown gravelly loam (lower part of subsoil)
15 to 25 inches—grayish brown gravelly sandy loam (substratum)
25 to 29 inches—fractured unweathered granodiorite
Reference profile of Haplocryods, stony:
Organic mat on surface—1 inch thick
0 to 3 inches—gray stony sandy loam (surface layer)
3 to 13 inches—dark brown and strong brown fine sandy loam (upper part of subsoil)
13 to 32 inches—yellowish brown sandy loam (lower part of subsoil)
32 to 60 inches—light yellowish brown extremely cobbly loam (substratum)
Depth class: Haplocryods, cold—moderately deep or deep; Haplocryods, stony—very deep
Drainage class: Well drained
Permeability: Haplocryods, cold—moderate or moderately rapid; Haplocryods, stony—moderate
Available water capacity: Haplocryods, cold—low; Haplocryods, stony—moderately high

Contrasting Inclusions

- Soils that are volcanic ash and have less rock fragments in the subsoil (Isella)
- Rock outcrop
- Rubble land

Development Limitations

Haplocryods, cold
Corrosivity: Uncoated steel—moderate; concrete—moderate
Fences: Moderate—depth to bedrock and slope
Pipelines: Severe—slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—slope
Brush control: Severe—slope

Operability Considerations

Haplocryods, stony
Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Severe

Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

126—Haplocryods-Andic Cryochrepts-Rock outcrop complex, steep and very steep*

Composition

Haplocryods and similar soils—40 percent
Andic Cryochrepts and similar soils—20 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Haplocryods—mountainsides and ridge crests; Andic Cryochrepts—concave positions on mountainsides and cirque basin headwalls
Parent material: Haplocryods—volcanic ash mixed with colluvium and residuum derived from igneous and metamorphic rock; Andic Cryochrepts—volcanic ash mixed with colluvium
Slope range: 30 to 90 percent
Elevation: 2,500 to 8,000 feet
Average annual precipitation: 75 to 110 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): Haplocryods—60 to 90 days; Andic Cryochrepts—50 to 80 days
Rock fragments on surface: Andic Cryochrepts—stones and boulders cover 10 to 50 percent

Soil Properties

Reference profile of Haplocryods:
  Organic mat on surface—2 inches thick
  0 to 6 inches—brown loam (surface layer when mixed)
  6 to 15 inches—light brown gravelly sandy loam (upper part of subsoil)
  15 to 29 inches—light olive brown very gravelly sandy loam (lower part of subsoil)
  29 to 52 inches—light yellowish brown very gravelly sandy loam (substratum)
  52 to 56 inches—fractured granodiorite
Reference profile of Andic Cryochrepts:
  Organic mat on surface—3 inches thick
  0 to 4 inches—yellowish brown extremely stony loam (surface layer)
  4 to 10 inches—grayish brown very cobbly loam (subsoil)
  10 to 60 inches—dark yellowish brown very cobbly loam (substratum)
Depth class: Haplocryods—moderately deep or deep; Andic Cryochrepts—moderately deep to very deep
Drainage class: Well drained
Permeability: Haplocryods—moderate or moderately rapid; Andic Cryochrepts—moderate
Available water capacity: Haplocryods—low; Andic Cryochrepts—moderate

Rock Outcrop

Kind of rock: Granodiorite, gneiss, schist, and andesite

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that are volcanic ash and have less rock fragments in the subsoil (Isella)

Operability Considerations

Haplocryods and Andic Cryochrepts
Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

127—Haploxerolls, moderately steep*

Composition

Haploxerolls and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Terraces
Parent material: Glacial outwash and glacial lake sediment mixed with loess, volcanic ash, and pumice in the upper part
Slope range: 8 to 30 percent
Elevation: 1,400 to 2,800 feet
Average annual precipitation: 15 to 25 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 46 to 49 degrees F (mesic)
Growing season (28 degrees F): 150 to 190 days
Frost-free season (32 degrees F): 110 to 150 days
Rock fragments on surface: Stones, cobbles, and boulders cover 3 to 10 percent

Soil Properties

Reference profile:
0 to 10 inches—grayish brown very stony fine sandy loam (surface layer)
10 to 26 inches—light brownish gray very stony sandy loam (subsoil)
26 to 60 inches—pale brown extremely cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 26 inches and rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that are subject to flooding (Mippon)
- Soils that are volcanic ash and pumice throughout (Mansonia)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)
- Soils that have an extremely cindery sandy loam subsoil (Palmich)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe

Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

128—Haploxerolls, very steep*

Composition

Haploxerolls and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Terrace escarpments
Parent material: Glacial outwash and glacial lake sediment mixed with loess, volcanic ash, and pumice in the upper part
Slope range: 45 to 90 percent
Elevation: 1,400 to 2,800 feet
Average annual precipitation: 15 to 25 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 46 to 49 degrees F (mesic)
Growing season (28 degrees F): 150 to 190 days
Frost-free season (32 degrees F): 110 to 150 days
Rock fragments on surface: Stones, cobbles, and boulders cover 3 to 10 percent

Soil Properties

Reference profile:
 0 to 10 inches—grayish brown very stony fine sandy loam (surface layer)
 10 to 26 inches—light brownish gray very stony sandy loam (subsoil)
 26 to 60 inches—pale brown extremely cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 26 inches and rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that are volcanic ash and pumice throughout (Mansonia)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)
- Soils that have an extremely cindery sandy loam subsoil (Palmich)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

129—Humicryods-Andic Cryumbrepts complex, gently sloping to moderately steep*

Composition

Humicryods and similar soils—40 percent
Andic Cryumbrepts and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Humicryods—mountainsides on all aspects; Andic Cryumbrepts—avalanche chutes in concave positions on mountainsides
Parent material: Humicryods—volcanic ash mixed with colluvium derived from many kinds of rock; Andic Cryumbrepts—volcanic ash mixed with colluvium derived from metamorphic and igneous rock
Slope range: 3 to 30 percent
Elevation: 4,000 to 8,000 feet
Average annual precipitation: 70 to 130 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 38 to 43 degrees F (cryic)
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 50 to 80 days
Rock fragments on surface: Humicryods—boulders and stones cover 1 to 3 percent; Andic Cryumbrepts—stones and boulders cover 10 to 50 percent

Soil Properties

Reference profile of Humicryods:
Organic mat on surface—3 inches thick
0 to 2 inches—gray bouldery loamy sand (surface layer)
2 to 10 inches—dark reddish brown, dark brown, and strong brown fine sandy loam (upper part of subsoil)
10 to 20 inches—light yellowish brown very cobbly sandy loam (lower part of subsoil)
20 to 39 inches—light yellowish brown very cobbly loamy coarse sand (substratum)
39 to 49 inches—weathered granodiorite
Reference profile of Andic Cryumbrepts:
Organic mat on surface—3 inches thick
0 to 4 inches—yellowish brown extremely stony sandy loam (surface layer)
4 to 10 inches—grayish brown very cobbly loam (subsoil)
10 to 60 inches—dark yellowish brown very cobbly loam (substratum)
Depth class: Humicryods—moderately deep and deep; Andic Cryumbrepts—very deep
Drainage class: Well drained
Permeability: Humicryods—moderate in the upper 20 inches and moderately rapid below this depth; Andic Cryumbrepts—moderate
Available water capacity: Humicryods—low; Andic Cryumbrepts—moderate

Contrasting Inclusions

- Soils that are poorly drained (Andic Cryaquepts)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that consist of angular rock fragments (Reggad)

Operability Considerations

Humicryods
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

Development Limitations

Andic Cryumbrepts
Corrosivity: Uncoated steel—moderate; concrete—moderate
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

130—Humicryods-Andic Cryochrepts-Rock outcrop complex, steep and very steep*

Composition

Humicryods and similar soils—40 percent
Andic Cryochrepts and similar soils—20 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Humicryods—mountainsides on all aspects; Andic Cryochrepts—avalanche chutes in concave positions on mountainsides
Parent material: Humicryods—volcanic ash mixed with colluvium derived from many kinds of rock; Andic Cryochrepts—volcanic ash mixed with colluvium derived from metamorphic and igneous rock
Slope range: 40 to 120 percent
Elevation: 4,000 to 8,000 feet
Average annual precipitation: 70 to 130 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 38 to 43 degrees F (cryic)
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 50 to 80 days
Rock fragments on surface: Humicryods—boulders and stones cover 1 to 3 percent; Andic Cryochrepts—stones and boulders cover 10 to 50 percent

Soil Properties

Reference profile of Humicryods:
Organic mat on surface—3 inches thick
0 to 2 inches—gray bouldery loamy sand (surface layer)
2 to 10 inches—dark reddish brown, dark brown, and strong brown fine sandy loam (upper part of subsoil)

10 to 20 inches—light yellowish brown very cobbly sandy loam (lower part of subsoil)
20 to 39 inches—light yellowish brown very cobbly loamy coarse sand (substratum)
39 to 49 inches—weathered granodiorite

Reference profile of Andic Cryochrepts:
Organic mat on surface—3 inches thick
0 to 4 inches—yellowish brown extremely stony loam (surface layer)
4 to 10 inches—grayish brown very cobbly loam (subsoil)
10 to 60 inches—dark yellowish brown very cobbly loam (substratum)

Depth class: Humicryods—moderately deep and deep; Andic Cryochrepts—very deep
Drainage class: Well drained
Permeability: Humicryods—moderate in the upper 20 inches and moderately rapid below this depth; Andic Cryochrepts—moderate
Available water capacity: Humicryods—low; Andic Cryochrepts—moderately high

Rock Outcrop

Kind of rock: Granodiorite, gneiss, and schist

Contrasting Inclusions

- Soils that have a very gravelly loamy sand subsoil (Altapeak)
- Soils that are volcanic ash with 0 to 10 percent rock fragments (Isella)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that consist of angular rock fragments (Reggad)

Operability Considerations

Humicryods and Andic Cryochrepts
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

131—Humicryods-Andic Cryumbrepts-Rock outcrop complex, steep and very steep*

Composition

Humicryods and similar soils—40 percent
Andic Cryumbrepts and similar soils—20 percent
Rock outcrop—15 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Humicryods—mountainsides that have a northerly aspect and valleys; Andic Cryumbrepts—mountainsides that have a southerly aspect, ridgetops, and cirque basins
Parent material: Humicryods—volcanic ash mixed with colluvium derived from many kinds of rock; Andic Cryumbrepts—volcanic ash mixed with residuum and colluvium

Slope range: 30 to 90 percent
Elevation: 4,000 to 8,000 feet
Average annual precipitation: Humicryods—70 to 130 inches; Andic Cryumbrepts—75 to 150 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 38 to 43 degrees F (cryic)
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 50 to 80 days
Rock fragments on surface: Humicryods—boulders and stones cover 1 to 3 percent

Soil Properties

Reference profile of Humicryods:
Organic mat on surface—3 inches thick
0 to 2 inches—gray bouldery loamy sand (surface layer)
2 to 10 inches—dark reddish brown, dark brown, and strong brown fine sandy loam (upper part of subsoil)
10 to 20 inches—light yellowish brown very cobbly sandy loam (lower part of subsoil)
20 to 39 inches—light yellowish brown very cobbly loamy coarse sand (substratum)
39 to 49 inches—weathered granodiorite
Reference profile of Andic Cryumbrepts:
Organic mat on surface—1 inch thick
0 to 10 inches—brown sandy loam (surface layer)
10 to 16 inches—yellowish brown gravelly sandy loam (upper part of subsoil)
16 to 33 inches—light yellowish brown very gravelly sandy loam (lower part of subsoil)
33 to 51 inches—pale yellow very gravelly sandy loam (substratum)
51 to 55 inches—unweathered granodiorite
Depth class: Moderately deep to very deep
Drainage class: Well drained
Permeability: Humicryods—moderate in the upper 20 inches and moderately rapid below this depth; Andic Cryumbrepts—moderately rapid
Available water capacity: Low

Contrasting Inclusions

- Soils that have a very gravelly loamy sand subsoil (Altapeak)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that are volcanic ash and pumice (Fernow)
- Soils that are volcanic ash with 0 to 10 percent rock fragments (Isella)
- Rubble land
- Snowfields

Operability Considerations

Humicryods
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

Development Limitations

Andic Cryumbrepts
Corrosivity: Uncoated steel—moderate; concrete—moderate
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

132—Hyprairie silt loam, 25 to 45 percent slopes

Composition

Hyprairie and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides and toeslopes that generally have a southerly aspect
Parent material: Residuum derived from sandstone mixed with loess in the upper part
Slope range: 25 to 45 percent
Elevation: 2,000 to 3,400 feet
Average annual precipitation: 18 to 20 inches
Average annual air temperature: 46 to 48 degrees F (mesic)
Frost-free season (32 degrees F): 110 to 140 days

Soil Properties

Typical profile:
0 to 6 inches—dark grayish brown silt loam (upper part of surface layer)
6 to 22 inches—brown silt loam (lower part of surface layer)
22 to 41 inches—brown silty clay loam (upper part of subsoil)
41 to 60 inches—light yellowish brown silty clay loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 22 inches and moderately rapid below this depth
Available water capacity: Very high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Borland)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Moderate—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

133—Hyprairie silt loam, 45 to 65 percent slopes

Composition

Hyprairie and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a southerly aspect
Parent material: Residuum derived from sandstone mixed with loess in the upper part
Slope range: 45 to 65 percent
Elevation: 2,000 to 3,400 feet
Average annual precipitation: 18 to 20 inches
Average annual air temperature: 46 to 48 degrees F (mesic)
Frost-free season (32 degrees F): 110 to 140 days

Soil Properties

Typical profile:
  0 to 6 inches—dark grayish brown silt loam (upper part of surface layer)
  6 to 22 inches—brown silt loam (lower part of surface layer)
  22 to 41 inches—brown silty clay loam (upper part of subsoil)
  41 to 60 inches—light yellowish brown silty clay loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 22 inches and moderately slow below this depth
Available water capacity: Very high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Borland)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

134—Hyprairie-Oldbutte complex, 45 to 65 percent slopes

Composition

Hyprairie and similar soils—45 percent
Oldbutte and similar soils—40 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Hyprairie—mountainsides that generally have a southerly aspect; Oldbutte—mountainsides that generally have a northerly aspect
Parent material: Hyprairie—residuum derived from sandstone mixed with loess in the upper part; Oldbutte—weathered sandstone mixed with loess in the upper part
Slope range: 45 to 65 percent
Elevation: 2,600 to 3,400 feet
Average annual precipitation: Hyprairie—18 to 20 inches; Oldbutte—18 to 22 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: Hyprairie—46 to 48 degrees F (mesic); Oldbutte—43 to 45 degrees F (frigid)
Growing season (28 degrees F): Oldbutte—130 to 170 days
Frost-free season (32 degrees F): Hyprairie—110 to 140 days; Oldbutte—90 to 110 days

Soil Properties

Typical profile of Hyprairie:
  0 to 6 inches—dark grayish brown silt loam (upper part of surface layer)
  6 to 22 inches—brown silt loam (lower part of surface layer)
  22 to 41 inches—brown silty clay loam (upper part of subsoil)
  41 to 60 inches—light yellowish brown silty clay loam (lower part of subsoil)
Typical profile of Oldbutte:
  0 to 17 inches—dark grayish brown and grayish brown silt loam (surface layer)
  17 to 36 inches—brown clay loam (subsoil)
  36 to 60 inches—brown loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Hyprairie—moderate in the upper 22 inches and moderately slow below this depth; Oldbutte—moderate in the upper 17 inches and moderately slow below this depth
Available water capacity: Very high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Borland)

Development Limitations

Hyprairie
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

Operability Considerations

Oldbutte
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft and sticky
Road rock: Not available
Cut and fill slope stability: Slump

135—Icicle association, 30 to 60 percent slopes*

Composition

Icicle, south, and similar soils—40 percent
Icicle and similar soils—40 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Icicle, south—mountainsides that commonly have a southerly aspect; Icicle—mountainsides
Parent material: Icicle, south—colluvium and in places glacial till mixed with volcanic ash and loess; Icicle—colluvium derived from granitic rock mixed with loess and volcanic ash

Slope range: 30 to 60 percent
Elevation: 2,800 to 4,500 feet
Average annual precipitation: 35 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Icicle, south—43 to 45 degrees F (frigid); Icicle—42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Icicle, south—boulders cover 2 to 3 percent; Icicle—boulders and stones cover 5 to 15 percent

Soil Properties

Typical profile of Icicle, south:
Organic mat on surface—0.5 inch thick
0 to 5 inches—grayish brown bouldery sandy loam (surface layer)
5 to 24 inches—yellowish brown very cobbly sandy loam (subsoil)
24 to 60 inches—pale brown extremely stony sandy loam (substratum)
Typical profile of Icicle:
Organic mat on surface—0.5 inch thick
0 to 5 inches—dark brown very bouldery sandy loam (surface layer)
5 to 20 inches—light yellowish brown extremely cobbly sandy loam (subsoil)
20 to 60 inches—pale brown extremely cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have volcanic ash 18 to 24 inches thick over compact glacial till (Natapoc)
- Soils that have volcanic ash and have less rock fragments in the subsoil (Saska)
- Rock outcrop

Operability Considerations

Icicle, south
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Icicle
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

136—Icicle bouldery sandy loam, 30 to 60 percent slopes

Composition

Icicle and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that commonly have a southerly aspect
Parent material: Colluvium derived from granitic rock and in places glacial till mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,800 to 4,600 feet
Average annual precipitation: 35 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Boulders cover 2 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 5 inches—grayish brown bouldery sandy loam (surface layer)
5 to 24 inches—yellowish brown very cobbly sandy loam (subsoil)
24 to 60 inches—pale brown extremely stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a colder temperature regime and have less rock fragments in the subsoil (Chiwaukum)
- Soils that have volcanic ash and have less rock fragments in the subsoil (Saska)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

137—Icicle very bouldery sandy loam, 3 to 30 percent slopes

Composition

Icicle and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Toeslopes, terraces, and mountainsides
Parent material: Colluvium derived from granitic rock mixed with loess and volcanic ash
Slope range: 3 to 30 percent
Elevation: 2,000 to 4,500 feet
Average annual precipitation: 28 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Boulders and stones cover 5 to 15 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 5 inches—dark brown very bouldery sandy loam (surface layer)
5 to 20 inches—light yellowish brown extremely cobbly sandy loam (subsoil)
20 to 60 inches—pale brown extremely cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have volcanic ash 18 to 24 inches thick over compact glacial till (Natapoc)
- Soils that have volcanic ash and have less rock fragments in the subsoil (Saska)
- Soils that have an extremely cobbly loamy coarse sand substratum (Mippon)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

138—Icicle very bouldery sandy loam, 30 to 75 percent slopes

Composition

Icicle and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from granitic rock mixed with loess and volcanic ash
Slope range: 30 to 75 percent
Elevation: 2,000 to 4,500 feet
Average annual precipitation: 28 to 50 inches

Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Boulders and stones cover 5 to 15 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 5 inches—dark brown very bouldery sandy loam (surface layer)
5 to 20 inches—light yellowish brown extremely cobbly sandy loam (subsoil)
20 to 60 inches—pale brown extremely cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have volcanic ash and have less rock fragments in the subsoil (Saska)
- Soils that have volcanic ash 18 to 24 inches thick over compact glacial till (Natapoc)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

139—Icicle stony fine sandy loam, 30 to 60 percent slopes

Composition

Icicle and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from granitic rock mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,000 to 4,500 feet
Average annual precipitation: 28 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 100 to 130 days

Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 5 inches—gray stony fine sandy loam (surface layer)
5 to 30 inches—light brownish gray very cobbly sandy loam and very stony loam (subsoil)
30 to 60 inches—gray very stony fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have an extremely gravelly clay loam subsoil (Serpen)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

140—Icicle-Chumstick-Rock outcrop association, 45 to 90 percent slopes*

Composition

Icicle and similar soils—30 percent
Chumstick and similar soils—25 percent
Rock outcrop—25 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from granitic rock mixed with volcanic ash and loess
Slope range: 45 to 90 percent
Elevation: 1,500 to 5,000 feet
Average annual precipitation: Icicle—28 to 50 inches; Chumstick—24 to 32 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): Icicle—100 to 130 days; Chumstick—90 to 120 days
Rock fragments on surface: Icicle—boulders and stones cover 5 to 15 percent; Chumstick—stones cover 1 to 3 percent

Soil Properties

Typical profile of Icicle:
Organic mat on surface—0.5 inch thick
0 to 8 inches—dark grayish brown very bouldery sandy loam (surface layer)
8 to 28 inches—pale brown very gravelly sandy loam (subsoil)
28 to 50 inches—very pale brown very cobbly sandy loam (substratum)
50 to 54 inches—unweathered granite
Typical profile of Chumstick:
0 to 4 inches—brown stony sandy loam (surface layer)
4 to 14 inches—brown very stony sandy loam (upper part of subsoil)
14 to 19 inches—brown extremely stony sandy loam (lower part of subsoil)
19 to 23 inches—unweathered granite
Depth class: Icicle—deep; Chumstick—shallow
Drainage class: Well drained
Permeability: Icicle—moderate; Chumstick—moderately rapid
Available water capacity: Icicle—low; Chumstick—very low

Rock Outcrop

Kind of rock: Granite and granodiorite

Contrasting Inclusions

- Soils that have volcanic ash and have less rock fragments in the subsoil (Saska)
- Soils that have volcanic ash 18 to 24 inches thick over compact glacial till (Natapoc)
- Soils that have a colder temperature regime and have less rock fragments in the subsoil (Chiwaukum)

Operability Considerations

Icicle
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Chumstick
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

141—Icicle-Chumstick-Rock outcrop complex, 45 to 90 percent slopes

Composition

Icicle and similar soils—35 percent
Chumstick and similar soils—25 percent
Rock outcrop—25 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from granitic rock mixed with volcanic ash and loess
Slope range: 45 to 90 percent
Elevation: 1,500 to 5,000 feet
Average annual precipitation: Icicle—28 to 50 inches; Chumstick—24 to 32 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): Icicle—100 to 130 days; Chumstick—90 to 120 days
Rock fragments on surface: Icicle—boulders and stones cover 5 to 15 percent; Chumstick—stones cover 1 to 3 percent

Soil Properties

Typical profile of Icicle:
Organic mat on surface—0.5 inch thick
0 to 8 inches—dark grayish brown very bouldery sandy loam (surface layer)
8 to 28 inches—pale brown very gravelly sandy loam (subsoil)
28 to 50 inches—very pale brown very cobbly sandy loam (substratum)
50 to 54 inches—unweathered granite
Typical profile of Chumstick:
0 to 4 inches—brown stony sandy loam (surface layer)
4 to 14 inches—brown very stony sandy loam (upper part of subsoil)
14 to 19 inches—brown extremely stony sandy loam (lower part of subsoil)
19 to 23 inches—unweathered granite
Depth class: Icicle—deep; Chumstick—shallow
Drainage class: Well drained
Permeability: Icicle—low; Chumstick—moderately rapid
Available water capacity: Icicle—moderate; Chumstick—very low

Rock Outcrop

Kind of rock: Granite and granodiorite

Contrasting Inclusions

- Soils that have volcanic ash and have less rock fragments in the subsoil (Saska)
- Soils that have volcanic ash 18 to 24 inches thick over compact glacial till (Natapoc)
- Soils that have a colder temperature regime and have less rock fragments in the subsoil (Chiwaukum)

Operability Considerations

Icicle
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Chumstick
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate

Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

142—Inkler stony fine sandy loam, 30 to 60 percent slopes

Composition

Inkler and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,000 to 4,800 feet
Average annual precipitation: 30 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 110 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 4 inches—grayish brown stony fine sandy loam (surface layer)
4 to 10 inches—pale brown very cobbly sandy loam (upper part of subsoil)
10 to 29 inches—light yellowish brown very stony sandy loam (lower part of subsoil)
29 to 44 inches—pale brown extremely cobbly sandy loam (substratum)
44 to 48 inches—fractured unweathered gneiss
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 10 inches and rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil (Tillicum)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

143—Isella-Fernow association, 3 to 30 percent slopes*

Composition

Isella and similar soils—40 percent
Fernow and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Isella—toeslopes, mountainsides, and cirque basins; Fernow—glaciated valleys and mountainsides
Parent material: Isella—volcanic ash; Fernow—volcanic ash and pumice
Slope range: 3 to 30 percent
Elevation: 5,000 to 6,000 feet
Average annual precipitation: Isella—80 to 120 inches; Fernow—75 to 100 inches
Snowpack: Isella—more than 3 feet in November through April; Fernow—more than 3 feet in December through March
Average annual air temperature: Isella—38 to 40 degrees F (cryic); Fernow—40 to 42 degrees F (cryic)
Growing season (28 degrees F): Isella—80 to 100 days; Fernow—100 to 130 days
Frost-free season (32 degrees F): Isella—50 to 80 days; Fernow—60 to 90 days

Soil Properties

Typical profile of Isella:
  Organic mat on surface—3 inches thick
  0 to 6 inches—reddish brown loam (surface layer when mixed)
  6 to 20 inches—yellowish red loam (upper part of subsoil)
  20 to 45 inches—very pale brown fine sandy loam (lower part of subsoil)
  45 to 50 inches—yellowish brown loam (upper part of buried subsoil)
  50 to 60 inches—light yellowish brown sandy loam (lower part of buried subsoil)
Typical profile of Fernow:
  Organic mat on surface—2 inches thick
  0 to 5 inches—reddish brown loam (upper part of subsoil when mixed)
  5 to 27 inches—strong brown and very pale brown loam (lower part of subsoil)
  27 to 34 inches—light yellowish brown very cindery loam (upper part of substratum)
  34 to 46 inches—very pale brown extremely cindery sandy loam (middle part of substratum)
  46 to 60 inches—very pale brown and white cinders (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Isella—moderate; Fernow—moderate and moderately rapid in the upper 46 inches and rapid below this depth
Available water capacity: Isella—high; Fernow—moderately high

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Nimue)
- Soils that consist of angular rock fragments (Reggad)
- Rock outcrop

Operability Considerations

Isella
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate

Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Stable

Fernow
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

144—Isella-Fernow association, 30 to 60 percent slopes*

Composition

Isella and similar soils—40 percent
Fernow and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Isella—mountainsides and cirque basins; Fernow—mountainsides
Parent material: Isella—volcanic ash; Fernow—volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 5,000 to 6,000 feet
Average annual precipitation: Isella—80 to 120 inches; Fernow—75 to 100 inches
Snowpack: Isella—more than 3 feet in November through April; Fernow—more than 3 feet in December through March
Average annual air temperature: Isella—38 to 40 degrees F (cryic); Fernow—40 to 42 degrees F (cryic)
Growing season (28 degrees F): Isella—80 to 100 days; Fernow—100 to 130 days
Frost-free season (32 degrees F): Isella—50 to 80 days; Fernow—60 to 90 days

Soil Properties

Typical profile of Isella:
Organic mat on surface—3 inches thick
0 to 6 inches—reddish brown loam (surface layer when mixed)
6 to 20 inches—yellowish red loam (upper part of subsoil)
20 to 45 inches—very pale brown fine sandy loam (lower part of subsoil)
45 to 50 inches—yellowish brown loam (upper part of buried subsoil)
50 to 60 inches—light yellowish brown sandy loam (lower part of buried subsoil)
Typical profile of Fernow:
Organic mat on surface—2 inches thick
0 to 5 inches—reddish brown loam (upper part of subsoil when mixed)
5 to 27 inches—strong brown and very pale brown loam (lower part of subsoil)
27 to 34 inches—light yellowish brown very cindery loam (upper part of substratum)
34 to 46 inches—very pale brown extremely cindery sandy loam (middle part of substratum)
46 to 60 inches—very pale brown and white cinders (lower part of substratum)
Depth class: Very deep

Drainage class: Well drained
Permeability: Isella—moderate; Fernow—moderate and moderately rapid in the upper 46 inches and rapid below this depth
Available water capacity: Isella—high; Fernow—moderately high

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Nimue)
- Soils that consist of angular rock fragments (Reggad)
- Rock outcrop

Operability Considerations

Isella
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Slump

Fernow
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

145—Isella-Nimue association, 3 to 30 percent slopes*

Composition

Isella and similar soils—40 percent
Nimue and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Isella—toeslopes of mountainsides and cirque basins; Nimue—mountainsides
Parent material: Isella—volcanic ash; Nimue—colluvium derived from schist and gneiss with a mantle of volcanic ash
Slope range: 3 to 30 percent
Elevation: 4,000 to 5,000 feet
Average annual precipitation: Isella—80 to 120 inches; Nimue—70 to 110 inches
Snowpack: Isella—more than 3 feet in November through April; Nimue—more than 3 feet in December through March
Average annual air temperature: Isella—40 to 42 degrees F (cryic); Nimue—38 to 41 degrees F (cryic)
Growing season (28 degrees F): Isella—90 to 110 days; Nimue—100 to 130 days
Frost-free season (32 degrees F): Isella—50 to 80 days; Nimue—60 to 90 days

Soil Properties

Typical profile of Isella:
Organic mat on surface—1.5 inches thick

0 to 2 inches—pinkish gray loam (surface layer)
2 to 12 inches—reddish brown and yellowish red loam (upper part of subsoil)
12 to 24 inches—strong brown loam (lower part of subsoil)
24 to 60 inches—reddish brown and light brown loam (buried subsoil)

Typical profile of Nimue:
Organic mat on surface—4 inches thick
0 to 7 inches—dark reddish brown and yellowish red cobbly fine sandy loam (upper part of subsoil)
7 to 14 inches—strong brown very cobbly silt loam (lower part of subsoil)
14 to 60 inches—dark brown and olive brown extremely stony sandy loam (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Isella—very high; Nimue—moderate

Contrasting Inclusions

- Soils that have an extremely cindery sandy loam substratum (Fernow)
- Soils that consist of angular rock fragments (Reggad)
- Rock outcrop

Operability Considerations

Isella
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Stable

Nimue
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

146—Isella-Nimue association, 30 to 60 percent slopes*

Composition

Isella and similar soils—40 percent
Nimue and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Isella—mountainsides and cirque basins; Nimue—mountainsides
Parent material: Isella—volcanic ash; Nimue—colluvium derived from schist and gneiss with a mantle of volcanic ash

Slope range: 30 to 60 percent
Elevation: 4,000 to 5,000 feet
Average annual precipitation: Isella—80 to 120 inches; Nimue—70 to 110 inches
Snowpack: Isella—more than 3 feet in November through April; Nimue—more than 3 feet in December through March
Average annual air temperature: Isella—40 to 42 degrees F (cryic); Nimue—38 to 41 degrees F (cryic)
Growing season (28 degrees F): Isella—90 to 110 days; Nimue—100 to 130 days
Frost-free season (32 degrees F): Isella—50 to 80 days; Nimue—60 to 90 days
Rock fragments on surface: Nimue—boulders and stones cover 2 to 3 percent

Soil Properties

Typical profile of Isella:
Organic mat on surface—1.5 inches thick
0 to 2 inches—pinkish gray loam (surface layer)
2 to 12 inches—reddish brown and yellowish red loam (upper part of subsoil)
12 to 24 inches—strong brown loam (lower part of subsoil)
24 to 60 inches—reddish brown and light brown loam (buried subsoil)
Typical profile of Nimue:
Organic mat on surface—1.5 inches thick
0 to 2 inches—gray bouldery sandy loam (subsurface layer)
2 to 14 inches—strong brown very cobbly loam (subsoil)
14 to 60 inches—yellowish brown and light olive brown very cobbly fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Isella—very high; Nimue—moderate

Contrasting Inclusions

- Soils that have an extremely cindery sandy loam substratum (Fernow)
- Soils that consist of angular rock fragments (Reggad)
- Rock outcrop

Operability Considerations

Isella
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Slump

Nimue
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

147—Kingmont gravelly loam, 30 to 60 percent slopes

Composition

Kingmont and similar soils—90 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Colluvium and residuum derived from serpentine mixed with small amounts of volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,200 to 4,800 feet
Average annual precipitation: 27 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 140 to 165 days
Frost-free season (32 degrees F): 80 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 14 inches—very pale brown gravelly loam (upper part of surface layer)
14 to 28 inches—very pale brown extremely gravelly loam (lower part of surface layer)
28 to 60 inches—pale brown and light yellowish brown extremely gravelly clay loam (subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 28 inches and moderately slow below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Culving)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

148—Kladnick cobbly fine sandy loam, 0 to 8 percent slopes

Composition

Kladnick and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces
Parent material: Glacial outwash with a mantle of volcanic ash
Slope range: 0 to 8 percent
Elevation: 2,200 to 2,600 feet
Average annual precipitation: 45 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 44 to 45 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 14 inches—pale brown cobbly fine sandy loam (surface layer)
14 to 21 inches—pale brown very gravelly loamy sand (subsoil)
21 to 60 inches—multicolored extremely cobbly sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 14 inches and rapid and very rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have a colder temperature regime (Cryomont)
- Soils that have a cindery sandy loam subsoil (Bigcreek)
- Soils that are poorly drained (Aquic Cryumbrepts)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

149—Kladnick gravelly fine sandy loam, 3 to 30 percent slopes

Composition

Kladnick and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Terraces, alluvial fans, and toeslopes
Parent material: Alluvium and colluvium mixed with volcanic ash in the upper part
Slope range: 3 to 30 percent
Elevation: 2,000 to 2,600 feet
Average annual precipitation: 45 to 75 inches
Snowpack: More than 1 foot in December through March

Average annual air temperature: 44 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—3 inches thick
0 to 8 inches—strong brown gravelly fine sandy loam (surface layer when mixed)
8 to 19 inches—grayish brown very gravelly sandy loam (subsoil)
19 to 60 inches—grayish brown very gravelly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 19 inches and rapid and very rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have a colder temperature regime (Cryomont)
- Soils that are volcanic ash and pumice in the upper part of the subsoil (Line)
- Soils that are volcanic ash and pumice in the subsoil and have an extremely stony sandy loam substratum (Vabbing)
- Soils that are poorly drained (Aquic Cryumbrepts)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

150—Kladnick very stony sandy loam, 3 to 15 percent slopes

Composition

Kladnick and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Alluvial fans and terraces
Parent material: Alluvium mixed with volcanic ash and pumice
Slope range: 3 to 15 percent
Elevation: 2,300 to 2,600 feet
Average annual precipitation: 40 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 130 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Stones and boulders cover 3 to 15 percent

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick

0 to 6 inches—yellowish brown very stony sandy loam (surface layer when mixed)
6 to 11 inches—light brownish gray extremely gravelly loamy sand (subsoil)
11 to 60 inches—olive brown extremely gravelly sand (substratum)

Depth class: Very deep
Drainage class: Well drained and somewhat excessively drained
Permeability: Moderately rapid in the upper 11 inches and rapid and very rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have an extremely stony coarse sandy loam substratum (Chiwaukum)
- Soils that have a colder temperature regime (Cryomont)
- Soils that are poorly drained (Aquic Cryumbrepts)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

151—Klapatche-Altapeak association, 30 to 60 percent slopes*

Composition

Klapatche and similar soils—40 percent
Altapeak and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Klapatche—mountainsides and ridge crests; Altapeak—backslopes of mountains
Parent material: Klapatche—volcanic ash and pumice over colluvium derived from granodiorite; Altapeak—volcanic ash mixed with colluvium derived from granodiorite
Slope range: 30 to 60 percent
Elevation: 3,200 to 4,800 feet
Average annual precipitation: Klapatche—70 to 90 inches; Altapeak—70 to 95 inches
Snowpack: Klapatche—more than 3 feet in December through March; Altapeak—more than 3 feet in November through April
Average annual air temperature: Klapatche—41 to 43 degrees F (cryic); Altapeak—39 to 41 degrees F (cryic)
Growing season (28 degrees F): Klapatche—110 to 130 days; Altapeak—90 to 120 days
Frost-free season (32 degrees F): Klapatche—70 to 90 days; Altapeak—50 to 80 days
Rock fragments on surface: Klapatche—stones and boulders cover 3 to 15 percent

Soil Properties

Typical profile of Klapatche:
Organic mat on surface—2 inches thick

0 to 4 inches—gray very stony loamy sand (surface layer when mixed)
4 to 12 inches—yellowish brown gravelly sandy loam (subsoil)
12 to 26 inches—grayish brown very cobbly loamy sand (buried subsoil)
26 to 37 inches—reddish gray extremely gravelly sand (substratum)
37 to 47 inches—weathered granodiorite

Typical profile of Altapeak:
Organic mat on surface—4 inches thick
0 to 13 inches—dark brown and strong brown gravelly sandy loam (upper part of subsoil when mixed)
13 to 29 inches—light brown very stony loamy sand (lower part of subsoil)
29 to 54 inches—very pale brown extremely stony loamy sand (substratum)
54 to 64 inches—weathered granodiorite

Depth class: Klapatche—moderately deep; Altapeak—deep
Drainage class: Well drained
Permeability: Klapatche—moderately rapid in the upper 12 inches and very rapid below this depth; Altapeak—moderately rapid in the upper 13 inches and rapid below this depth
Available water capacity: Klapatche—very low; Altapeak—low

Contrasting Inclusions

- Soils that have volcanic ash in the upper part of the subsoil (Almac and Chiwaukum)
- Rock outcrop

Operability Considerations

Klapatche
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Slight
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Altapeak
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

152—Kloochman gravelly fine sandy loam, 3 to 30 percent slopes

Composition

Kloochman and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Toeslopes, mountainsides, and ridgetops

Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash
Slope range: 3 to 30 percent
Elevation: 2,500 to 4,500 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 3 inches—grayish brown gravelly fine sandy loam (surface layer)
3 to 18 inches—brown gravelly fine sandy loam (subsoil)
18 to 34 inches—light yellowish brown very channery sandy loam (substratum)
34 to 38 inches—fractured unweathered gneiss
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate in the upper 18 inches and moderately rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have less rock fragments in the substratum (Ardening and Ardenmont)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

153—Kloochman gravelly fine sandy loam, 30 to 60 percent slopes

Composition

Kloochman and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,500 to 4,800 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)

Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 3 inches—grayish brown gravelly fine sandy loam (surface layer)
  3 to 18 inches—brown gravelly fine sandy loam (subsoil)
  18 to 34 inches—light yellowish brown very channery sandy loam (substratum)
  34 to 38 inches—fractured unweathered gneiss
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate in the upper 18 inches and moderately rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have less rock fragments in the substratum (Ardening and Ardenmont)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

154—Kloochman gravelly fine sandy loam, 60 to 90 percent slopes

Composition

Kloochman and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash
Slope range: 60 to 90 percent
Elevation: 3,000 to 4,800 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 3 inches—grayish brown gravelly fine sandy loam (surface layer)
  3 to 18 inches—brown gravelly fine sandy loam (subsoil)

18 to 34 inches—light yellowish brown very channery sandy loam (substratum)
34 to 38 inches—fractured unweathered gneiss

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate in the upper 18 inches and moderately rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have less rock fragments in the substratum (Ardening and Ardenmont)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

155—Kloochman-Inkler association, 30 to 60 percent slopes*

Composition

Kloochman and similar soils—45 percent
Inkler and similar soils—35 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Kloochman—colluvium and residuum derived from gneiss and schist mixed with volcanic ash; Inkler—colluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,000 to 4,800 feet
Average annual precipitation: 30 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Kloochman—41 to 43 degrees F (frigid); Inkler—41 to 44 degrees F (frigid)
Growing season (28 degrees F): Kloochman—130 to 160 days; Inkler—140 to 170 days
Frost-free season (32 degrees F): Kloochman—90 to 120 days; Inkler—90 to 110 days
Rock fragments on surface: Inkler—stones cover 1 to 3 percent

Soil Properties

Typical profile of Kloochman:
Organic mat on surface—0.5 inch thick
0 to 3 inches—grayish brown gravelly fine sandy loam (surface layer)
3 to 18 inches—brown gravelly fine sandy loam (subsoil)

18 to 34 inches—light yellowish brown very channery sandy loam (substratum)
34 inches—fractured unweathered gneiss

Typical profile of Inkler:
0 to 4 inches—grayish brown stony fine sandy loam (surface layer)
4 to 10 inches—pale brown very cobbly sandy loam (upper part of subsoil)
10 to 29 inches—light yellowish brown very stony sandy loam (lower part of subsoil)
29 to 44 inches—pale brown extremely cobbly sandy loam (substratum)
44 to 48 inches—fractured unweathered gneiss

Depth class: Kloochman—moderately deep; Inkler—deep
Drainage class: Well drained
Permeability: Kloochman—moderate in the upper 18 inches and moderately rapid below this depth; Inkler—rapid
Available water capacity: Kloochman—moderate; Inkler—moderately high

Contrasting Inclusions

- Soils that have less rock fragments in the substratum (Ardening and Ardenmont)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Rock outcrop

Operability Considerations

Kloochman
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Inkler
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

156—Kloochman-Inkler-Rock outcrop association, 45 to 75 percent slopes*

Composition

Kloochman and similar soils—35 percent
Inkler and similar soils—30 percent
Rock outcrop—15 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Kloochman—colluvium and residuum derived from gneiss and schist mixed with volcanic ash; Inkler—colluvium derived from gneiss and schist with a mantle of volcanic ash

Slope range: 45 to 75 percent
Elevation: 3,000 to 5,000 feet
Average annual precipitation: 30 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Kloochman—43 to 45 degrees F (frigid); Inkler—41 to 44 degrees F (frigid)
Growing season (28 degrees F): Kloochman—135 to 160 days; Inkler—140 to 170 days
Frost-free season (32 degrees F): Kloochman—100 to 140 days; Inkler—90 to 110 days
Rock fragments on surface: Kloochman—flagstones cover 1 to 3 percent; Inkler—stones cover 1 to 3 percent

Soil Properties

Typical profile of Kloochman:
0 to 3 inches—gray flaggy fine sandy loam (surface layer)
3 to 20 inches—brown and pale brown cobbly sandy loam (subsoil)
20 to 36 inches—light yellowish brown very cobbly sandy loam (substratum)
36 to 40 inches—fractured unweathered schist
Typical profile of Inkler:
0 to 4 inches—grayish brown stony fine sandy loam (surface layer)
4 to 10 inches—pale brown very cobbly sandy loam (upper part of subsoil)
10 to 29 inches—light yellowish brown very stony sandy loam (lower part of subsoil)
29 to 44 inches—pale brown extremely cobbly sandy loam (substratum)
44 to 48 inches—fractured unweathered gneiss
Depth class: Kloochman—moderately deep; Inkler—deep
Drainage class: Well drained
Permeability: Kloochman—moderate in the upper 18 inches and moderately rapid below this depth; Inkler—moderate in the upper 10 inches and rapid below this depth
Available water capacity: Kloochman—very low; Inkler—low

Contrasting Inclusions

- Soils that have less rock fragments in the substratum (Ardening and Ardenmont)

Operability Considerations

Kloochman
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Inkler
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

157—Kloochman-Rock outcrop complex, 45 to 75 percent slopes

Composition

Kloochman and similar soils—70 percent
Rock outcrop—15 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that commonly have a southerly aspect
Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash
Slope range: 45 to 75 percent
Elevation: 2,500 to 5,000 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 160 days
Frost-free season (32 degrees F): 100 to 140 days
Rock fragments on surface: Kloochman—flagstones cover 1 to 3 percent

Soil Properties

Typical profile of Kloochman:
  0 to 3 inches—gray flaggy fine sandy loam (surface layer)
  3 to 20 inches—brown and pale brown cobbly sandy loam (subsoil)
  20 to 36 inches—light yellowish brown very cobbly sandy loam (substratum)
  36 to 40 inches—fractured unweathered schist
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate in the upper 20 inches and moderately rapid below this depth
Available water capacity: Very low

Rock Outcrop

Kind of rock: Gneiss

Contrasting Inclusions

- Soils that less rock fragments in the substratum (Ardening)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)

Operability Considerations

Kloochman
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

158—Limking stony loam, 30 to 60 percent slopes

Composition

Limking and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a southerly aspect
Parent material: Volcanic ash over colluvium and residuum derived from granitic rock
Slope range: 30 to 60 percent
Elevation: 4,000 to 5,500 feet
Average annual precipitation: 30 to 45 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 135 to 170 days
Frost-free season (32 degrees F): 100 to 140 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 6 inches—brown stony loam (surface layer when mixed)
6 to 13 inches—brown gravelly loam (upper part of subsoil)
13 to 22 inches—light brown very gravelly sandy loam (middle part of subsoil)
22 to 44 inches—light yellowish brown extremely gravelly loamy sand (lower part of subsoil)
44 to 58 inches—brownish yellow extremely gravelly loamy coarse sand (substratum)
58 to 62 inches—unweathered granodiorite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 13 inches and moderately rapid or rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have a very cindery sandy loam substratum (Goffpeak)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

159—Limking-Coopmont association, 30 to 60 percent slopes*

Composition

Limking and similar soils—40 percent
Coopmont and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Limking—mountainsides that generally have a southerly aspect; Coopmont—backslopes of mountains
Parent material: Limking—volcanic ash over colluvium and residuum derived from granitic rock; Coopmont—volcanic ash and pumice over colluvium derived from granodiorite
Slope range: 30 to 60 percent
Elevation: 4,500 to 6,000 feet
Average annual precipitation: Limking—35 to 45 inches; Coopmont—30 to 50 inches
Snowpack: Limking—more than 1 foot in December through March; Coopmont—more than 3 feet in December through March
Average annual air temperature: Limking—42 to 44 degrees F (frigid); Coopmont—39 to 41 degrees F (cryic)
Growing season (28 degrees F): Limking—135 to 170 days; Coopmont—100 to 140 days
Frost-free season (32 degrees F): Limking—100 to 140 days; Coopmont—60 to 90 days
Rock fragments on surface: Limking—stones cover 1 to 3 percent

Soil Properties

Typical profile of Limking:
Organic mat on surface—0.5 inch thick
0 to 6 inches—brown stony loam (surface layer)
6 to 13 inches—brown gravelly loam (upper part of subsoil)
13 to 22 inches—light brown very gravelly sandy loam (middle part of subsoil)
22 to 44 inches—light yellowish brown extremely gravelly loamy sand (lower part of subsoil)
44 to 58 inches—brownish yellow extremely gravelly loamy coarse sand (substratum)
58 to 62 inches—unweathered granodiorite
Typical profile of Coopmont:
Organic mat on surface—2 inches thick
0 to 5 inches—pale brown fine sandy loam (surface layer when mixed)
5 to 12 inches—pale brown cindery sandy loam (upper part of subsoil)
12 to 28 inches—light yellowish brown cindery loamy sand (middle part of subsoil)
28 to 50 inches—light gray and very pale brown very gravelly sandy loam (lower part of subsoil)
50 to 60 inches—very pale brown extremely gravelly sand (substratum)
Depth class: Limking—deep; Coopmont—very deep
Drainage class: Well drained
Permeability: Limking—moderate in the upper 13 inches and moderately rapid or rapid below this depth; Coopmont—moderate in the upper 50 inches and very rapid below this depth

Available water capacity: Limking—low; Coopmont—moderately high

Contrasting Inclusions

- Soils that have an influence of volcanic ash in the upper 7 to 14 inches (Palmont)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rock outcrop
- Rubble land

Operability Considerations

Limking
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Coopmont
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

160—Limking-Coopmont complex, 30 to 60 percent slopes

Composition

Limking and similar soils—40 percent
Coopmont and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Limking—mountainsides that generally have a southerly aspect; Coopmont—mountainsides
Parent material: Limking—volcanic ash over colluvium and residuum derived from granitic rock; Coopmont—volcanic ash and pumice over granitic rock
Slope range: 30 to 60 percent
Elevation: 4,500 to 6,000 feet
Average annual precipitation: Limking—35 to 45 inches; Coopmont—30 to 50 inches
Snowpack: Limking—more than 1 foot in December through March; Coopmont—more than 3 feet in December through March
Average annual air temperature: Limking—42 to 44 degrees F (frigid); Coopmont—39 to 41 degrees F (cryic)
Growing season (28 degrees F): Limking—135 to 170 days; Coopmont—100 to 140 days
Frost-free season (32 degrees F): Limking—100 to 140 days; Coopmont—60 to 90 days
Rock fragments on surface: Limking—stones cover 1 to 3 percent

Soil Properties

Typical profile of Limking:
Organic mat on surface—0.5 inch thick
0 to 6 inches—brown stony loam (surface layer)
6 to 13 inches—brown gravelly loam (upper part of subsoil)
13 to 22 inches—light brown very gravelly sandy loam (middle part of subsoil)
22 to 44 inches—light yellowish brown extremely gravelly loamy sand (lower part of subsoil)
44 to 58 inches—brownish yellow extremely gravelly loamy coarse sand (substratum)
58 to 62 inches—unweathered granodiorite

Typical profile of Coopmont:
Organic mat on surface—2 inches thick
0 to 5 inches—pale brown fine sandy loam (surface layer when mixed)
5 to 12 inches—pale brown cindery sandy loam (upper part of subsoil)
12 to 28 inches—light yellowish brown cindery loamy sand (middle part of subsoil)
28 to 50 inches—light gray and very pale brown very gravelly sandy loam (lower part of subsoil)
50 to 60 inches—very pale brown extremely gravelly sand (substratum)

Depth class: Limking—deep; Coopmont—very deep
Drainage class: Well drained
Permeability: Limking—moderate in the upper 13 inches and moderately rapid or rapid below this depth; Coopmont—moderate in the upper 50 inches and very rapid below this depth
Available water capacity: Limking—low; Coopmont—moderately high

Contrasting Inclusions

- Soils that have an influence of volcanic ash in the upper 7 to 14 inches (Palmont)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rock outcrop
- Rubble land

Operability Considerations

Limking
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Coopmont
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

161—Limking-Coopmont-Rock outcrop association, 30 to 60 percent slopes*

Composition

Limking and similar soils—30 percent
Coopmont and similar soils—25 percent
Rock outcrop—20 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Limking—mountainsides that have a southerly aspect; Coopmont—backslopes of mountains
Parent material: Limking—volcanic ash over colluvium and residuum derived from granitic rock; Coopmont—volcanic ash and pumice over colluvium derived from granodiorite
Slope range: 30 to 60 percent
Elevation: 4,000 to 5,500 feet
Average annual precipitation: Limking—30 to 45 inches; Coopmont—30 to 50 inches
Snowpack: Limking—more than 1 foot in December through March; Coopmont—more than 3 feet in December through March
Average annual air temperature: Limking—42 to 44 degrees F (frigid); Coopmont—39 to 41 degrees F (cryic)
Growing season (28 degrees F): Limking—135 to 170 days; Coopmont—100 to 140 days
Frost-free season (32 degrees F): Limking—100 to 140 days; Coopmont—60 to 90 days
Rock fragments on surface: Limking—stones cover 1 to 3 percent

Soil Properties

Typical profile of Limking:
Organic mat on surface—0.5 inch thick
0 to 6 inches—brown stony loam (surface layer when mixed)
6 to 13 inches—brown gravelly loam (upper part of subsoil)
13 to 22 inches—light brown very gravelly sandy loam (middle part of subsoil)
22 to 44 inches—light yellowish brown extremely gravelly loamy sand (lower part of subsoil)
44 to 58 inches—brownish yellow extremely gravelly loamy coarse sand (substratum)
58 to 62 inches—unweathered granodiorite
Typical profile of Coopmont:
Organic mat on surface—2 inches thick
0 to 5 inches—pale brown fine sandy loam (surface layer when mixed)
5 to 12 inches—pale brown cindery sandy loam (upper part of subsoil)
12 to 28 inches—light yellowish brown cindery loamy sand (middle part of subsoil)
28 to 50 inches—light gray and very pale brown very gravelly sandy loam (lower part of subsoil)
50 to 60 inches—very pale brown extremely gravelly sand (substratum)
Depth class: Limking—deep; Coopmont—very deep
Drainage class: Well drained
Permeability: Limking—moderate in the upper 13 inches and moderately rapid or

rapid below this depth; Coopmont—moderate in the upper 50 inches and very rapid below this depth
Available water capacity: Limking—low; Coopmont—moderately high

Rock Outcrop

Kind of rock: Granite and granodiorite

Contrasting Inclusions

- Soils that have an influence of volcanic ash in the upper 7 to 14 inches (Palmont)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rubble land

Operability Considerations

Limking
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Coopmont
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

162—Limking-Rock outcrop complex, 30 to 60 percent slopes

Composition

Limking and similar soils—55 percent
Rock outcrop—20 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Volcanic ash over colluvium and residuum derived from granitic rock
Slope range: 30 to 60 percent
Elevation: 4,000 to 5,500 feet
Average annual precipitation: 30 to 45 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 135 to 170 days
Frost-free season (32 degrees F): 100 to 140 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of Limking:
Organic mat on surface—0.5 inch thick

0 to 6 inches—brown stony loam (surface layer when mixed)
6 to 13 inches—brown gravelly loam (upper part of subsoil)
13 to 22 inches—light brown very gravelly sandy loam (middle part of subsoil)
22 to 44 inches—light yellowish brown extremely gravelly loamy sand (lower part of subsoil)
44 to 58 inches—brownish yellow extremely gravelly loamy coarse sand (substratum)
58 to 62 inches—unweathered granodiorite

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 13 inches and moderately rapid or rapid below this depth
Available water capacity: Low

Rock Outcrop

Kind of rock: Granite and granodiorite

Contrasting Inclusions

- Soils that have a very cindery sandy loam substratum (Goffpeak)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)

Operability Considerations

Limking
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

163—Line cindery fine sandy loam, 3 to 30 percent slopes

Composition

Line and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces
Parent material: Volcanic ash and pumice over glacial outwash
Slope range: 3 to 30 percent
Elevation: 2,000 to 2,700 feet
Average annual precipitation: 65 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 42 degrees F (cryic)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 70 to 110 days

Soil Properties

Typical profile:
Organic mat on surface—4 inches thick
0 to 4 inches—light yellowish brown cindery fine sandy loam (upper part of subsoil when mixed)

4 to 15 inches—light yellowish brown cindery sandy loam (middle part of subsoil)
15 to 31 inches—pale yellow very gravelly loamy sand (lower part of subsoil)
31 to 60 inches—light brownish gray extremely gravelly coarse sand (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 15 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a very gravelly loamy sand subsoil and are subject to flooding (Cryomont)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

164—Line gravelly fine sandy loam, 3 to 30 percent slopes

Composition

Line and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Alluvial fans and terraces
Parent material: Volcanic ash mixed with alluvium and glacial outwash
Slope range: 3 to 30 percent
Elevation: 2,000 to 2,700 feet
Average annual precipitation: 70 to 105 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 42 degrees F (cryic)
Growing season (28 degrees F): 120 to 140 days
Frost-free season (32 degrees F): 80 to 100 days

Soil Properties

Typical profile:
Organic mat on surface—1.5 inches thick
0 to 10 inches—light yellowish brown gravelly fine sandy loam (upper part of subsoil when mixed)
10 to 21 inches—light brownish gray very gravelly sandy loam (lower part of subsoil)
21 to 60 inches—grayish brown extremely gravelly coarse sand (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 21 inches and very rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a very gravelly loamy sand subsoil and are subject to a hazard of flooding (Cryomont)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

165—Line stony fine sandy loam, 30 to 60 percent slopes

Composition

Line and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terrace escarpments
Parent material: Volcanic ash and pumice over glacial outwash
Slope range: 30 to 60 percent
Elevation: 2,100 to 2,700 feet
Average annual precipitation: 65 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 42 degrees F (cryic)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 70 to 110 days
Rock fragments on surface: Stones and boulders cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 8 inches—yellowish brown stony fine sandy loam (upper part of subsoil when mixed)
8 to 22 inches—brown very cindery sandy loam (lower part of subsoil)
22 to 60 inches—multicolored very gravelly coarse sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 22 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate

Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

166—Line-Vabbing association, 3 to 30 percent slopes*

Composition

Line and similar soils—40 percent
Vabbing and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Line—alluvial fans and terraces; Vabbing—mountainsides that have an easterly or westerly aspect
Parent material: Line—volcanic ash mixed with alluvium and glacial outwash; Vabbing—volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 70 to 100 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Line—39 to 42 degrees F (cryic); Vabbing—41 to 43 degrees F (cryic)
Growing season (28 degrees F): Line—120 to 140 days; Vabbing—100 to 140 days
Frost-free season (32 degrees F): Line—80 to 100 days; Vabbing—70 to 100 days
Rock fragments on surface: Vabbing—boulders cover 2 to 3 percent

Soil Properties

Typical profile of Line:
  Organic mat on surface—1.5 inches thick
  0 to 10 inches—light yellowish brown gravelly fine sandy loam (upper part of subsoil when mixed)
  10 to 21 inches—light brownish gray very gravelly sandy loam (lower part of subsoil)
  21 to 60 inches—grayish brown extremely gravelly coarse sand (substratum)
Typical profile of Vabbing:
  Organic mat on surface—4 inches thick
  0 to 3 inches—light brownish gray bouldery sandy loam (surface layer)
  3 to 10 inches—light brown cindery sandy loam (upper part of subsoil)
  10 to 26 inches—white and reddish yellow cinders and light gray very cindery coarse sand (lower part of subsoil)
  26 to 60 inches—very pale brown very gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Line—moderate in the upper 21 inches and very rapid below this depth; Vabbing—moderate in the upper 10 inches and rapid to moderate below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a very gravelly loamy sand subsoil and are subject to a hazard of flooding (Cryomont)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)

Operability Considerations

Line
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

Vabbing
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

167—Loneridge stony loam, 3 to 30 percent slopes

Composition

Loneridge and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Benches and plateaus on mountains
Parent material: Residuum and colluvium derived from basalt or andesite mixed with loess and volcanic ash
Slope range: 3 to 30 percent
Elevation: 3,500 to 4,700 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 46 degrees F (frigid)
Growing season (28 degrees F): 130 to 155 days
Frost-free season (32 degrees F): 80 to 105 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 9 inches—light brownish gray stony loam (surface layer)
9 to 36 inches—yellowish brown and light yellowish brown very cobbly clay loam (upper part of subsoil)
36 to 60 inches—yellowish brown extremely gravelly clay loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 9 inches and slow below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Anatone and Blewett)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

168—Loneridge stony loam, 3 to 30 percent north slopes

Composition

Loneridge and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Plateaus and mountainsides
Parent material: Residuum and colluvium derived from basalt or andesite mixed with loess and volcanic ash
Slope range: 3 to 30 percent
Elevation: 3,000 to 4,400 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 45 degrees F (frigid)
Growing season (28 degrees F): 125 to 150 days
Frost-free season (32 degrees F): 75 to 100 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 4 inches—dark grayish brown stony loam (upper part of surface layer)
4 to 9 inches—light brownish gray very gravelly loam (lower part of surface layer)
9 to 20 inches—pale brown very gravelly clay loam (upper part of subsoil)
20 to 30 inches—yellowish brown extremely gravelly clay loam (middle part of subsoil)
30 to 60 inches—yellowish brown very cobbly clay loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 30 inches and slow below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Blewett)
- Soils that have a colder temperature regime (Naxing)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate

Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Stable

169—Loneridge very stony loam, 30 to 60 percent slopes

Composition

Loneridge and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Residuum and colluvium derived from basalt or andesite mixed with loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,000 to 4,900 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 45 degrees F (frigid)
Growing season (28 degrees F): 125 to 150 days
Frost-free season (32 degrees F): 75 to 100 days
Rock fragments on surface: Stones cover 3 to 15 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 8 inches—grayish brown very stony loam (surface layer)
8 to 45 inches—yellowish brown very cobbly clay loam (upper part of subsoil)
45 to 60 inches—yellowish brown extremely cobbly clay loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 8 inches and slow below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Blewett)
- Soils that have a colder temperature regime (Naxing)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Slight
Displacement hazard (dry): Slight
Dust hazard: Severe
Hazard of soil damage by fire: Slight
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Slump

170—Macreeing stony fine sandy loam, 30 to 60 percent slopes

Composition

Macreeing and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Loess and volcanic ash mixed with colluvium derived from rhyolite or granodiorite
Slope range: 30 to 60 percent
Elevation: 2,500 to 3,800 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 140 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 5 inches—grayish brown stony fine sandy loam (surface layer)
5 to 23 inches—pale brown very cobbly sandy loam (subsoil)
23 to 48 inches—light yellowish brown very cobbly coarse sandy loam (substratum)
48 to 52 inches—fractured unweathered rhyolite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have a cindery fine sandy loam subsoil (Bisping)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

171—Macreeing stony fine sandy loam, 60 to 90 percent slopes

Composition

Macreeing and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Loess and volcanic ash mixed with colluvium derived from rhyolite or granodiorite
Slope range: 60 to 90 percent
Elevation: 2,500 to 3,800 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 140 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
  0 to 5 inches—grayish brown stony fine sandy loam (surface layer)
  5 to 23 inches—pale brown very cobbly sandy loam (subsoil)
  23 to 48 inches—light yellowish brown very cobbly coarse sandy loam (substratum)
  48 to 52 inches—fractured unweathered rhyolite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have a cindery fine sandy loam subsoil (Bisping)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

172—Macreeing-Rock outcrop complex, 45 to 90 percent slopes

Composition

Macreeing and similar soils—45 percent
Rock outcrop—30 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Loess and volcanic ash mixed with colluvium derived from rhyolite or granodiorite
Slope range: 45 to 90 percent

Elevation: 2,500 to 3,800 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 140 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of Macreeing:
0 to 5 inches—grayish brown stony fine sandy loam (surface layer)
5 to 23 inches—pale brown very cobbly sandy loam (subsoil)
23 to 48 inches—light yellowish brown very cobbly coarse sandy loam (substratum)
48 to 52 inches—fractured unweathered rhyolite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Rock Outcrop

Kind of rock: Rhyolite or granodiorite

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have a cindery fine sandy loam subsoil (Bisping)
- Rubble land

Operability Considerations

Macreeing
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

173—Mansonia fine sandy loam, 30 to 60 percent slopes

Composition

Mansonia and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Foothills
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 1,100 to 2,800 feet
Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 160 days

Soil Properties

Typical profile:
0 to 12 inches—grayish brown fine sandy loam (upper part of surface layer)
12 to 19 inches—brown fine sandy loam (lower part of surface layer)
19 to 41 inches—light yellowish brown cindery fine sandy loam (subsoil)
41 to 60 inches—light gray very cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 41 inches and moderately rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that are extremely gravelly sand at a depth of 20 to 40 inches (Marmont)
- Soils that have bedrock at a depth of 10 to 20 inches (Swakane)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—droughty surface layer and slope
Brush control: Severe—slope

174—Mansonia-Swakane-Rock outcrop complex, 8 to 45 percent slopes

Composition

Mansonia and similar soils—50 percent
Swakane and similar soils—20 percent
Rock outcrop—20 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Mansonia—concave and smooth areas on toeslopes of foothills; Swakane—convex areas and areas surrounding Rock outcrop on toeslopes and mountainsides
Parent material: Mansonia—volcanic ash and pumice over granodiorite; Swakane—colluvium and residuum derived from gneiss, schist, and granodiorite mixed with volcanic ash and loess
Slope range: 8 to 45 percent
Elevation: 1,200 to 3,200 feet
Average annual precipitation: Mansonia—12 to 15 inches; Swakane—13 to 15 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): Mansonia—130 to 160 days; Swakane—130 to 155 days
Rock fragments on surface: Swakane—stones cover 1 to 3 percent

Soil Properties

Typical profile of Mansonia:
0 to 10 inches—grayish brown and brown cindery fine sandy loam (surface layer)

10 to 20 inches—light brownish gray cindery sandy loam (subsoil)
20 to 50 inches—pale brown cindery sandy loam (substratum)
50 to 54 inches—unweathered granodiorite

Typical profile of Swakane:
0 to 2 inches—dark brown stony sandy loam (upper part of surface layer)
2 to 15 inches—yellowish brown very gravelly coarse sandy loam (lower part of surface layer)
15 to 19 inches—fractured unweathered gneiss

Depth class: Mansonia—deep; Swakane—shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Mansonia—moderate; Swakane—very low

Rock Outcrop

Kind of rock: Granodiorite and granite

Contrasting Inclusions

- Soils that are extremely gravelly sand at a depth of 20 to 40 inches (Marmont)
- Soils that have more rock fragments in the subsoil and are very deep (Thowson)
- Rubble land

Development Limitations

Mansonia
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Moderate—slope

Swakane
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Moderate—slope

175—Mansonia-Swakane-Rock outcrop complex, 45 to 90 percent slopes

Composition

Mansonia and similar soils—30 percent
Swakane and similar soils—30 percent
Rock outcrop—30 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Mansonia—concave and smooth areas on foothills; Swakane—convex areas and areas surrounding Rock outcrop on mountainsides

Parent material: Mansonia—volcanic ash and pumice over granodiorite; Swakane—colluvium and residuum derived from gneiss, schist, and granodiorite mixed with volcanic ash and loess
Slope range: 45 to 90 percent
Elevation: 1,100 to 3,200 feet
Average annual precipitation: Mansonia—12 to 15 inches; Swakane—13 to 15 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): Mansonia—130 to 160 days; Swakane—130 to 155 days
Rock fragments on surface: Swakane—stones cover 2 to 3 percent

Soil Properties

Typical profile of Mansonia:
0 to 10 inches—grayish brown and brown cindery fine sandy loam (surface layer)
10 to 20 inches—light brownish gray cindery sandy loam (subsoil)
20 to 50 inches—pale brown cindery sandy loam (substratum)
50 to 54 inches—unweathered granodiorite
Typical profile of Swakane:
0 to 6 inches—dark brown stony sandy loam (upper part of surface layer)
6 to 11 inches—yellowish brown very gravelly coarse sandy loam (lower part of surface layer)
11 to 14 inches—yellowish brown very gravelly sandy loam
14 to 18 inches—fractured unweathered gneiss
Depth class: Mansonia—deep; Swakane—shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Mansonia—moderate; Swakane—very low

Rock Outcrop

Kind of rock: Granodiorite and granite

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil and are very deep (Thowson)
- Rubble land

Development Limitations

Mansonia
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

Swakane
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

176—Marmont cindery fine sandy loam, 3 to 15 percent slopes

Composition

Marmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces
Parent material: Volcanic ash and pumice over glacial outwash
Slope range: 3 to 15 percent
Elevation: 1,100 to 1,600 feet
Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 160 days

Soil Properties

Typical profile:
  0 to 10 inches—grayish brown cindery fine sandy loam (surface layer)
  10 to 22 inches—gray very cindery sandy loam (subsoil)
  22 to 60 inches—multicolored extremely gravelly sand (substratum)
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate in the upper 22 inches and very rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have a gravelly sandy loam subsoil (Brief)
- Soils that have a cindery sandy loam substratum (Mansonia)
- Soils that are very cobbly loamy sand between depths of 45 and 60 inches (Thowson)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Slight
Pipelines: Slight
Livestock ponds: Severe—seepage
Seeding: Slight
Brush control: Slight

177—Marmont cindery fine sandy loam, 15 to 30 percent slopes

Composition

Marmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces
Parent material: Volcanic ash and pumice over glacial outwash
Slope range: 15 to 30 percent
Elevation: 1,100 to 1,600 feet

Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 160 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown cindery fine sandy loam (surface layer)
10 to 22 inches—gray very cindery sandy loam (subsoil)
22 to 60 inches—multicolored extremely gravelly sand (substratum)
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate in the upper 22 inches and very rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have a gravelly sandy loam subsoil (Brief)
- Soils that have a cindery sandy loam substratum (Mansonia)
- Soils that are very cobbly loamy sand between depths of 45 and 60 inches (Thowson)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Moderate—slope
Pipelines: Moderate—slope
Livestock ponds: Severe—seepage and slope
Seeding: Moderate—slope
Brush control: Moderate—slope

178—Marmont cindery fine sandy loam, 30 to 75 percent slopes

Composition

Marmont and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Terraces and terrace escarpments
Parent material: Volcanic ash and pumice over glacial outwash
Slope range: 30 to 75 percent
Elevation: 1,100 to 1,600 feet
Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 160 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown cindery fine sandy loam (surface layer)
10 to 22 inches—gray very cindery sandy loam (subsoil)
22 to 60 inches—multicolored extremely gravelly sand (substratum)
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate in the upper 22 inches and very rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have a cindery sandy loam substratum (Mansonia)
- Soils that are very cobbly loamy sand between depths of 45 and 60 inches (Thowson)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—seepage and slope
Seeding: Severe—slope
Brush control: Severe—slope

179—McCree stony fine sandy loam, 8 to 30 percent slopes

Composition

McCree and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ridgetops, toeslopes, and mountainsides that generally have a southerly aspect
Parent material: Colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice
Slope range: 8 to 30 percent
Elevation: 3,000 to 4,800 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 5 inches—light brownish gray stony fine sandy loam (surface layer when mixed)
5 to 19 inches—very pale brown very stony fine sandy loam (subsoil)
19 to 36 inches—very pale brown extremely stony sandy loam (upper part of substratum)
36 to 56 inches—yellow extremely stony sandy loam (lower part of substratum)
56 to 60 inches—fractured unweathered rhyolite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have an extremely cindery sandy loam subsoil (Palmich)

- Soils that consist of cinders between depths of 15 and 53 inches (Ramparter)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

180—McCree stony fine sandy loam, 30 to 60 percent slopes

Composition

McCree and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 3,000 to 5,300 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 5 inches—light brownish gray stony fine sandy loam (surface layer when mixed)
5 to 19 inches—very pale brown very stony fine sandy loam (subsoil)
19 to 36 inches—very pale brown extremely stony sandy loam (upper part of substratum)
36 to 56 inches—yellow extremely stony sandy loam (lower part of substratum)
56 to 60 inches—fractured unweathered rhyolite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have an extremely cindery sandy loam subsoil (Palmich)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

181—McCree stony fine sandy loam, 60 to 90 percent slopes

Composition

McCree and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice
Slope range: 60 to 90 percent
Elevation: 3,400 to 5,300 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 5 inches—light brownish gray stony fine sandy loam (surface layer when mixed)
5 to 19 inches—very pale brown very stony fine sandy loam (subsoil)
19 to 36 inches—very pale brown extremely stony sandy loam (upper part of substratum)
36 to 56 inches—yellow extremely stony sandy loam (lower part of substratum)
56 to 60 inches—fractured unweathered rhyolite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have an extremely cindery sandy loam subsoil (Palmich)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate

Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

182—McCree-Palmich complex, 30 to 60 percent slopes

Composition

McCree and similar soils—50 percent
Palmich and similar soils—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: McCree—mountainsides that generally have a southerly aspect; Palmich—mountainsides
Parent material: McCree—colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice; Palmich—volcanic ash and pumice over colluvium derived from granodiorite or rhyolite
Slope range: 30 to 60 percent
Elevation: 3,000 to 5,200 feet
Average annual precipitation: McCree—20 to 30 inches; Palmich—25 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: McCree—43 to 45 degrees F (frigid); Palmich—42 to 44 degrees F (frigid)
Growing season (28 degrees F): McCree—135 to 175 days; Palmich—140 to 170 days
Frost-free season (32 degrees F): McCree—90 to 120 days; Palmich—80 to 110 days
Rock fragments on surface: McCree—stones cover 1 to 3 percent

Soil Properties

Typical profile of McCree:
  Organic mat on surface—1 inch thick
  0 to 5 inches—light brownish gray stony fine sandy loam (surface layer when mixed)
  5 to 19 inches—very pale brown very stony fine sandy loam (subsoil)
  19 to 36 inches—very pale brown extremely stony sandy loam (upper part of substratum)
  36 to 56 inches—yellow extremely stony sandy loam (lower part of substratum)
  56 to 60 inches—fractured unweathered rhyolite
Typical profile of Palmich:
  Organic mat on surface—2 inches thick
  0 to 4 inches—light gray cindery sandy loam (surface layer)
  4 to 26 inches—light brownish gray very cindery sandy loam (upper part of subsoil)
  26 to 44 inches—pale brown extremely cindery sandy loam (middle part of subsoil)
  44 to 60 inches—very pale brown very gravelly sandy loam (lower part of subsoil)
Depth class: McCree—deep; Palmich—very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: McCree—low; Palmich—moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rock outcrop

Operability Considerations

McCree
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Palmich
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

183—McCree-Palmont-Rock outcrop association, 45 to 90 percent slopes*

Composition

McCree and similar soils—30 percent
Palmont and similar soils—30 percent
Rock outcrop—15 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: McCree—mountainsides that generally have a southerly aspect; Palmont—mountainsides that have a northerly aspect
Parent material: McCree—colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice; Palmont—volcanic ash and pumice mixed with colluvium derived from rhyolite and granodiorite
Slope range: 45 to 90 percent
Elevation: 3,200 to 5,300 feet
Average annual precipitation: McCree—20 to 30 inches; Palmont—25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: McCree—43 to 45 degrees F (frigid); Palmont—42 to 45 degrees F (frigid)
Growing season (28 degrees F): McCree—135 to 175 days; Palmont—120 to 150 days
Frost-free season (32 degrees F): McCree—90 to 120 days; Palmont—80 to 110 days
Rock fragments on surface: McCree—stones cover 1 to 3 percent; Palmont—cobbles and stones cover 1 to 3 percent

Soil Properties

Typical profile of McCree:

Organic mat on surface—1 inch thick

0 to 5 inches—light brownish gray stony fine sandy loam (surface layer when mixed)

5 to 19 inches—very pale brown very stony fine sandy loam (subsoil)

19 to 36 inches—very pale brown extremely stony sandy loam (upper part of substratum)

36 to 56 inches—yellow extremely stony sandy loam (lower part of substratum)

56 to 60 inches—fractured unweathered rhyolite

Typical profile of Palmont:

Organic mat on surface—0.5 inch thick

0 to 1 inch—light gray cobbly fine sandy loam (surface layer)

1 to 11 inches—light brownish gray gravelly fine sandy loam (subsoil)

11 to 60 inches—light gray very gravelly loamy sand (substratum)

Depth class: McCree—deep; Palmont—very deep

Drainage class: Well drained

Permeability: McCree—moderate; Palmont—moderately rapid in the upper 11 inches and rapid below this depth

Available water capacity: McCree—low; Palmont—moderately high

Rock Outcrop

Kind of rock: Granodiorite and rhyolite

Contrasting Inclusions

- Soils that have an extremely cindery sandy loam subsoil (Palmich)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rubble land

Operability Considerations

McCree

Compaction hazard (moist): Moderate

Puddling hazard (wet): Moderate

Displacement hazard (dry): Severe

Dust hazard: Moderate

Unsurfaced roads and skid trails (wet): Slippery

Road rock: Readily available

Cut and fill slope stability: Slump

Palmont

Compaction hazard (moist): Moderate

Puddling hazard (wet): Moderate

Displacement hazard (dry): Severe

Dust hazard: Moderate

Unsurfaced roads and skid trails (wet): Slippery and sticky

Road rock: Readily available

Cut and fill slope stability: Slump

184—McCree-Rock outcrop complex, 45 to 90 percent slopes

Composition

McCree and similar soils—55 percent
Rock outcrop—25 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a southerly aspect
Parent material: Colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice
Slope range: 45 to 90 percent
Elevation: 3,200 to 5,300 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of McCree:
Organic mat on surface—1 inch thick
0 to 5 inches—light brownish gray stony fine sandy loam (surface layer when mixed)
5 to 19 inches—very pale brown very stony fine sandy loam (subsoil)
19 to 36 inches—very pale brown extremely stony sandy loam (upper part of substratum)
36 to 56 inches—yellow extremely stony sandy loam (lower part of substratum)
56 to 60 inches—fractured unweathered rhyolite
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Rock Outcrop

Kind of rock: Granodiorite and rhyolite

Contrasting Inclusions

- Soils that have an extremely cindery sandy loam subsoil (Palmich)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate

Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

185—Mippon gravelly fine sandy loam, 0 to 3 percent slopes

Composition

Mippon and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Flood plains
Parent material: Alluvium
Slope range: 0 to 3 percent
Elevation: 1,200 to 2,100 feet
Average annual precipitation: 18 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 190 days
Frost-free season (32 degrees F): 100 to 150 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown gravelly fine sandy loam (surface layer)
10 to 18 inches—light brownish gray very cobbly loamy sand (upper part of substratum)
18 to 60 inches—multicolored extremely cobbly loamy coarse sand (lower part of substratum)
Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate in the upper 10 inches and very rapid below this depth
Available water capacity: Low
Seasonal high water table: Present in February through April (3 to 6 feet)
Frequency of flooding: Occasional, brief periods in February through May

Contrasting Inclusions

- Soils that have a very cobbly coarse sandy loam substratum and are well drained (Zeb)
- Soils that have less rock fragments in the substratum and have a warmer temperature regime (Billyridge)
- Soils that have a cindery fine sandy loam subsoil (Chiwawa)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Stable

186—Mippon very gravelly loamy fine sand, 0 to 3 percent slopes

Composition

Mippon and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Flood plains
Parent material: Alluvium
Slope range: 0 to 3 percent
Elevation: 1,200 to 2,100 feet
Average annual precipitation: 18 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 190 days
Frost-free season (32 degrees F): 100 to 150 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown very gravelly loamy fine sand (surface layer)
10 to 16 inches—light brownish gray very gravelly sandy loam (upper part of substratum)
16 to 60 inches—multicolored extremely cobbly loamy coarse sand (lower part of substratum)
Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderately rapid in the upper 16 inches and very rapid below this depth
Available water capacity: Very low
Seasonal high water table: Present in February through April (3 to 6 feet)
Frequency of flooding: Frequent, brief periods in February through May

Contrasting Inclusions

- Soils that have less rock fragments in the substratum and have a warmer temperature regime (Billyridge)
- Soils that have an extremely cobbly sandy loam substratum and have a warmer temperature regime (Burnscreek)
- Soils that are somewhat poorly drained (Aeric Fluvaquents)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Slight
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Stable

187—Mippon very bouldery loamy sand, 0 to 3 percent slopes

Composition

Mippon and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Flood plains
Parent material: Alluvium
Slope range: 0 to 3 percent
Elevation: 1,200 to 1,900 feet
Average annual precipitation: 20 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 190 days
Frost-free season (32 degrees F): 100 to 150 days
Rock fragments on surface: Boulders cover 10 to 20 percent

Soil Properties

Typical profile:
0 to 6 inches—grayish brown very bouldery loamy sand (surface layer)
6 to 18 inches—light brownish gray very cobbly loamy sand (upper part of substratum)
18 to 60 inches—multicolored extremely cobbly loamy sand (lower part of substratum)
Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Rapid in the upper 18 inches and very rapid below this depth
Available water capacity: Low
Seasonal high water table: Present in February through April (3 to 6 feet)
Frequency of flooding: Occasional, brief periods in March through May

Contrasting Inclusions

- Soils that have less rock fragments in the substratum and have a warmer temperature regime (Billyridge)
- Soils that have an extremely cobbly sandy loam substratum and have a warmer temperature regime (Burnscreek)
- Soils that are somewhat poorly drained (Aeric Fluvaquents)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Slight
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Stable

188—Morical fine sandy loam, 3 to 15 percent slopes

Composition

Morical and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ridgetops
Parent material: Residuum and colluvium derived from granite mixed with volcanic ash and loess in the upper part
Slope range: 3 to 15 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 100 to 140 days

Soil Properties

Typical profile:
  0 to 12 inches—grayish brown fine sandy loam (surface layer)
  12 to 23 inches—brown sandy loam (upper part of subsoil)
  23 to 37 inches—light yellowish brown sandy clay loam (lower part of subsoil)
  37 to 47 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a colder temperature regime (Switchback)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Moderate—depth to bedrock
Pipelines: Moderate—depth to bedrock
Livestock ponds: Severe—depth to bedrock
Seeding: Slight
Brush control: Slight

189—Morical fine sandy loam, 15 to 30 percent slopes

Composition

Morical and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ridgetops and mountainsides
Parent material: Residuum and colluvium derived from granite mixed with volcanic ash and loess in the upper part
Slope range: 15 to 30 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 100 to 140 days

Soil Properties

Typical profile:
0 to 12 inches—grayish brown fine sandy loam (surface layer)
12 to 23 inches—brown sandy loam (upper part of subsoil)
23 to 37 inches—light yellowish brown sandy clay loam (lower part of subsoil)
37 to 47 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a colder temperature regime (Switchback)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Moderate—depth to bedrock and slope
Pipelines: Moderate—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Moderate—slope
Brush control: Moderate—slope

190—Morical fine sandy loam, 30 to 60 percent slopes

Composition

Morical and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Residuum and colluvium derived from granite mixed with volcanic ash and loess in the upper part
Slope range: 30 to 60 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 100 to 140 days

Soil Properties

Typical profile:
0 to 12 inches—grayish brown fine sandy loam (surface layer)
12 to 23 inches—brown sandy loam (upper part of subsoil)
23 to 37 inches—light yellowish brown sandy clay loam (lower part of subsoil)
37 to 47 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a colder temperature regime (Switchback)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—slope
Brush control: Severe—slope

191—Morical-Dragoon complex, 30 to 60 percent slopes

Composition

Morical and similar soils—40 percent
Dragoon and similar soils—40 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that have an easterly, westerly, or southerly aspect
Parent material: Morical—residuum and colluvium derived from granite mixed with volcanic ash and loess in the upper part; Dragoon—colluvium derived from granitic rock mixed with loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,100 to 2,600 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 45 to 48 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 130 days

Soil Properties

Typical profile of Morical:
  0 to 12 inches—grayish brown fine sandy loam (surface layer)
  12 to 23 inches—brown sandy loam (upper part of subsoil)
  23 to 37 inches—light yellowish brown sandy clay loam (lower part of subsoil)
  37 to 47 inches—weathered granodiorite
Typical profile of Dragoon:
  0 to 10 inches—brown loam (surface layer)
  10 to 27 inches—brown and light brownish gray loam (subsoil)
  27 to 37 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Morical—moderate; Dragoon—moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Rock outcrop

Development Limitations

Morical
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope

Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—slope
Brush control: Severe—slope

Operability Considerations

Dragoon
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

192—Morical-Dragoon fine sandy loams, 3 to 30 percent slopes

Composition

Morical and similar soils—65 percent
Dragoon and similar soils—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Morical—ridgetops, of foothills, that have a southerly aspect; Dragoon—ridges, of mountains, that have a northerly aspect
Parent material: Morical—residuum and colluvium derived from granite mixed with volcanic ash and loess in the upper part; Dragoon—colluvium derived from granitic rock mixed with loess and volcanic ash
Slope range: 3 to 30 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 47 to 49 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 140 days

Soil Properties

Typical profile of Morical:
    0 to 12 inches—grayish brown fine sandy loam (surface layer)
    12 to 23 inches—brown sandy loam (upper part of subsoil)
    23 to 37 inches—light yellowish brown sandy clay loam (lower part of subsoil)
    37 to 47 inches—weathered granodiorite
Typical profile of Dragoon:
    0 to 8 inches—grayish brown fine sandy loam (surface layer)
    8 to 16 inches—pale brown loam (upper part of subsoil)
    16 to 24 inches—light brownish gray loam (lower part of subsoil)
    24 to 34 inches—weathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Morical—moderate; Dragoon—moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have a colder temperature regime (Switchback)
- Rock outcrop

Development Limitations

Morical
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Moderate—depth to bedrock and slope
Pipelines: Moderate—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Moderate—slope
Brush control: Moderate—slope

Operability Considerations

Dragoon
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

193—Morical-Dragoon fine sandy loams, 30 to 60 percent slopes

Composition

Morical and similar soils—65 percent
Dragoon and similar soils—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Morical—backslopes and ridgetops, of mountains, that have an easterly, westerly, or southerly aspect; Dragoon—backslopes and ridgetops, of mountains, that have a northerly aspect
Parent material: Morical—residuum and colluvium derived from granite mixed with volcanic ash and loess in the upper part; Dragoon—colluvium derived from granitic rock mixed with loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 47 to 49 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 140 days

Soil Properties

Typical profile of Morical:
0 to 12 inches—grayish brown fine sandy loam (surface layer)
12 to 23 inches—brown sandy loam (upper part of subsoil)
23 to 37 inches—light yellowish brown sandy clay loam (lower part of subsoil)
37 to 47 inches—weathered granodiorite

Typical profile of Dragoon:
0 to 8 inches—grayish brown fine sandy loam (surface layer)
8 to 16 inches—pale brown loam (upper part of subsoil)
16 to 24 inches—light brownish gray loam (lower part of subsoil)
24 to 34 inches—weathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Morical—moderate; Dragoon—moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have a colder temperature regime (Switchback)
- Rock outcrop

Development Limitations

Morical
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—slope
Brush control: Severe—slope

Operability Considerations

Dragoon
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

194—Morical-Dragoon fine sandy loams, 60 to 90 percent slopes

Composition

Morical and similar soils—65 percent
Dragoon and similar soils—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Morical—backslopes, of mountains, that have an easterly, westerly, or southerly aspect; Dragoon—backslopes, of mountains, that have a northerly aspect
Parent material: Morical—colluvium derived from granitic rock mixed with volcanic ash and loess in the upper part; Dragoon—residuum and colluvium derived from granitic rock mixed with volcanic ash and loess in the upper part
Slope range: 60 to 90 percent
Elevation: 2,000 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through March

Average annual air temperature: 47 to 49 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 140 days

Soil Properties

Typical profile of Morical:
0 to 12 inches—grayish brown fine sandy loam (surface layer)
12 to 23 inches—brown sandy loam (upper part of subsoil)
23 to 37 inches—light yellowish brown sandy clay loam (lower part of subsoil)
37 to 47 inches—weathered granodiorite
Typical profile of Dragoon:
0 to 8 inches—grayish brown fine sandy loam (surface layer)
8 to 16 inches—pale brown loam (upper part of subsoil)
16 to 24 inches—light brownish gray loam (lower part of subsoil)
24 to 34 inches—weathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have a colder temperature regime (Switchback)
- Rock outcrop

Development Limitations

Morical
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—slope
Brush control: Severe—slope

Operability Considerations

Dragoon
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

195—Mountaineer stony sandy loam, 30 to 60 percent slopes

Composition

Mountaineer and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that have a southerly aspect

Parent material: Colluvium derived from schist or gneiss mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,800 to 4,800 feet
Average annual precipitation: 40 to 70 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 4 inches—dark grayish brown stony sandy loam (upper part of surface layer)
4 to 19 inches—dark brown very cobbly sandy loam (lower part of surface layer)
19 to 38 inches—yellowish brown extremely stony sandy loam (subsoil)
38 to 42 inches—fractured unweathered schist
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil and have bedrock at a depth of 40 to 60 inches (Tillicum)
- Soils that have less rock fragments in the subsoil and have very stony sandy loam glacial till between depths of 16 and 60 inches (Saska)
- Soils that have an extremely cindery sandy loam subsoil and have bedrock at a depth of more than 60 inches (Wedgemont)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

196—Mountaineer-Rock outcrop complex, 45 to 90 percent slopes

Composition

Mountaineer and similar soils—60 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that have a southerly aspect
Parent material: Colluvium derived from schist or gneiss mixed with volcanic ash and loess
Slope range: 45 to 90 percent

Elevation: 1,400 to 4,800 feet
Average annual precipitation: 40 to 70 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of Mountaineer:
0 to 4 inches—dark grayish brown stony sandy loam (upper part of surface layer)
4 to 19 inches—dark brown very cobbly sandy loam (lower part of surface layer)
19 to 38 inches—yellowish brown extremely stony sandy loam (subsoil)
38 to 42 inches—fractured unweathered schist
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Rock Outcrop

Kind of rock: Schist or gneiss

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil and have bedrock at a depth of 40 to 60 inches (Tillicum)
- Soils that have less rock fragments in the subsoil and have very stony sandy loam glacial till between depths of 16 and 60 inches (Saska)
- Soils that have an extremely cindery sandy loam subsoil and have bedrock at a depth of more than 60 inches (Wedgemont)
- Rubble land

Operability Considerations

Mountaineer
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

197—Mountaineer-Tillicum-Rock outcrop association, 45 to 90 percent slopes*

Composition

Mountaineer and similar soils—35 percent
Tillicum and similar soils—30 percent
Rock outcrop—15 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountaineer—backslopes, of mountains, that have a southerly aspect; Tillicum—mountainsides that have a northerly aspect

Parent material: Mountaineer—colluvium derived from schist or gneiss mixed with volcanic ash and loess; Tillicum—volcanic ash over residuum and colluvium derived from gneiss or schist
Slope range: 45 to 90 percent
Elevation: 1,400 to 4,800 feet
Average annual precipitation: Mountaineer—40 to 70 inches; Tillicum—35 to 55 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Mountaineer—stones cover 1 to 3 percent

Soil Properties

Typical profile of Mountaineer:
0 to 4 inches—dark grayish brown stony sandy loam (upper part of surface layer)
4 to 19 inches—dark brown very cobbly sandy loam (lower part of surface layer)
19 to 38 inches—yellowish brown extremely stony sandy loam (subsoil)
38 to 42 inches—fractured unweathered schist
Typical profile of Tillicum:
Organic mat on surface—2 inches thick
0 to 8 inches—light brownish gray fine sandy loam (surface layer)
8 to 24 inches—light brownish gray and pale brown fine sandy loam (subsoil)
24 to 42 inches—pale brown cobbly sandy loam (substratum)
42 to 46 inches—unweathered schist
Depth class: Mountaineer—moderately deep; Tillicum—deep
Drainage class: Well drained
Permeability: Mountaineer—moderate; Tillicum—moderate in the upper 24 inches and moderately rapid below this depth
Available water capacity: Mountaineer—very low; Tillicum—moderate

Rock Outcrop

Kind of rock: Schist or gneiss

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil and have very stony sandy loam glacial till between depths of 16 and 60 inches (Saska)
- Soils that have an extremely cindery sandy loam subsoil and have bedrock at a depth of more than 60 inches (Wedgemont)
- Rubble land

Operability Considerations

Mountaineer
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Tillicum
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

198—Nahahum loam, 30 to 60 percent slopes

Composition

Nahahum and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that have a northerly aspect
Parent material: Colluvium and residuum derived from schist or gneiss with minor amounts of volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,500 to 4,200 feet
Average annual precipitation: 20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 46 degrees F (frigid)
Growing season (28 degrees F): 150 to 180 days
Frost-free season (32 degrees F): 85 to 125 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 3 inches—grayish brown loam (surface layer)
3 to 16 inches—pale brown loam (subsurface layer)
16 to 44 inches—yellowish brown gravelly clay loam (upper part of subsoil)
44 to 60 inches—brownish yellow cobbly loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 16 inches and moderately slow below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Swakane)
- Soils that have less clay in the subsoil and receive less rainfall (Shamel)
- Soils that have a very cobbly sandy loam subsoil (Ardenvoir)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Slump

199—Nahahum-Taneum complex, 30 to 60 percent slopes

Composition

Nahahum and similar soils—50 percent
Taneum and similar soils—40 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Nahahum—backslopes, of mountains, that have a westerly aspect; Taneum—backslopes, of mountains, that have a southerly aspect
Parent material: Colluvium and residuum derived from schist or gneiss with minor amounts of volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 3,000 to 3,800 feet
Average annual precipitation: Nahahum—20 to 22 inches; Taneum—15 to 18 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Nahahum—43 to 46 degrees F (frigid); Taneum—47 to 49 degrees F (mesic)
Growing season (28 degrees F): Nahahum—150 to 180 days; Taneum—160 to 195 days
Frost-free season (32 degrees F): Nahahum—85 to 145 days; Taneum—100 to 145 days

Soil Properties

Typical profile of Nahahum:
Organic mat on surface—1 inch thick
0 to 3 inches—grayish brown loam (surface layer)
3 to 16 inches—pale brown loam (subsurface layer)
16 to 44 inches—yellowish brown gravelly clay loam (upper part of subsoil)
44 to 60 inches—brownish yellow cobbly loam (lower part of subsoil)
Typical profile of Taneum:
0 to 16 inches—dark grayish brown and grayish brown loam (surface layer)
16 to 47 inches—brown and yellowish brown gravelly clay loam (upper part of subsoil)
47 to 58 inches—yellowish brown extremely cobbly clay loam (lower part of subsoil)
58 to 62 inches—fractured unweathered schist
Depth class: Nahahum—very deep; Taneum—deep
Drainage class: Well drained
Permeability: Nahahum—moderate in the upper 16 inches and moderately slow below this depth; Taneum—moderate in the upper 16 inches and slow below this depth
Available water capacity: Nahahum—high; Taneum—moderately high

Contrasting Inclusions

- Soils that receive less rainfall (Yaxon)
- Rock outcrop

Operability Considerations

Nahahum
Compaction hazard (moist): Severe

Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Slump

Development Limitations

Taneum
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

200—Nard sandy loam, 3 to 30 percent slopes

Composition

Nard and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides and toeslopes that generally have an easterly, westerly, or southerly aspect
Parent material: Residuum and colluvium derived from sandstone mixed with volcanic ash and loess
Slope range: 3 to 30 percent
Elevation: 1,600 to 3,600 feet
Average annual precipitation: 25 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 145 to 175 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 7 inches—pale brown and light brownish gray sandy loam (surface layer)
7 to 27 inches—pale brown and yellowish brown sandy loam (upper part of subsoil)
27 to 67 inches—strong brown, light yellowish brown, and dark brown loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Brisky and Blag)
- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Soils that have more rock fragments in the subsoil (Icicle and Shaser)

- Soils that have volcanic ash to a depth of 24 inches (Tillicum)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Stable

201—Nard sandy loam, 30 to 60 percent slopes

Composition

Nard and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides on all aspects
Parent material: Residuum and colluvium derived from sandstone mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 1,600 to 4,000 feet
Average annual precipitation: 25 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 145 to 175 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 7 inches—pale brown and light brownish gray sandy loam (surface layer)
7 to 27 inches—pale brown and yellowish brown sandy loam (upper part of subsoil)
27 to 67 inches—strong brown, light yellowish brown, and dark brown loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Brisky and Blag)
- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Soils that have more rock fragments in the subsoil (Icicle and Shaser)
- Soils that have volcanic ash to a depth of 24 inches (Tillicum)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Slump

202—Nard-Blag complex, 30 to 60 percent slopes

Composition

Nard and similar soils—40 percent
Blag and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Nard—mountainsides; Blag—mountainsides that commonly have a southerly aspect
Parent material: Nard—residuum and colluvium derived from sandstone mixed with volcanic ash and loess; Blag—colluvium and residuum derived from sandstone
Slope range: 30 to 60 percent
Elevation: 2,200 to 4,000 feet
Average annual precipitation: 22 to 28 inches
Snowpack: Nard—more than 1 foot in December through March; Blag—more than 1 foot in December through February
Average annual air temperature: Nard—43 to 44 degrees F (frigid); Blag—45 to 47 degrees F (mesic)
Growing season (28 degrees F): Nard—145 to 185 days; Blag—160 to 185 days
Frost-free season (32 degrees F): Nard—90 to 140 days; Blag—100 to 140 days

Soil Properties

Typical profile of Nard:
Organic mat on surface—1 inch thick
0 to 7 inches—pale brown and light brownish gray sandy loam (surface layer)
7 to 27 inches—pale brown and yellowish brown sandy loam (upper part of subsoil)
27 to 67 inches—strong brown, light yellowish brown, and dark brown loam (lower part of subsoil)
Typical profile of Blag:
0 to 6 inches—light brownish gray gravelly sandy loam (surface layer)
6 to 16 inches—pale brown gravelly sandy loam (subsoil)
16 to 20 inches—unweathered sandstone
Depth class: Nard—very deep; Blag—shallow
Drainage class: Well drained
Permeability: Nard—moderately slow; Blag—moderately rapid
Available water capacity: Nard—very high; Blag—very low

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Icicle and Shaser)
- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Rock outcrop

Operability Considerations

Nard
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Slump

Blag
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

203—Nard-Brisky complex, 30 to 60 percent slopes

Composition

Nard and similar soils—50 percent
Brisky and similar soils—35 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Nard—mountainsides that have an easterly, westerly, or southerly aspect; Brisky—mountainsides that commonly have a southerly aspect
Parent material: Nard—residuum and colluvium derived from sandstone mixed with volcanic ash and loess; Brisky—colluvium derived from sandstone mixed with loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,500 to 3,500 feet
Average annual precipitation: Nard—25 to 35 inches; Brisky—25 to 32 inches
Snowpack: Nard—more than 1 foot in December through March; Brisky—more than 1 foot in December through February
Average annual air temperature: Nard—42 to 44 degrees F (frigid); Brisky—45 to 47 degrees F (mesic)
Growing season (28 degrees F): Nard—145 to 175 days; Brisky—140 to 180 days
Frost-free season (32 degrees F): Nard—90 to 120 days; Brisky—110 to 130 days

Soil Properties

Typical profile of Nard:
Organic mat on surface—1 inch thick
0 to 7 inches—pale brown and light brownish gray sandy loam (surface layer)
7 to 27 inches—pale brown and yellowish brown sandy loam (upper part of subsoil)
27 to 67 inches—strong brown, light yellowish brown, and dark brown loam (lower part of subsoil)
Typical profile of Brisky:
0 to 4 inches—brown very gravelly sandy loam (surface layer)
4 to 10 inches—light yellowish brown very gravelly sandy loam (subsoil)
10 to 14 inches—unweathered sandstone
Depth class: Nard—very deep; Brisky—shallow
Drainage class: Well drained
Permeability: Nard—moderately slow; Brisky—moderate
Available water capacity: Nard—very high; Brisky—very low

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Soils that are extremely cobbly sandy loam between depths of 5 and 60 inches (Icicle)
- Rock outcrop

Operability Considerations

Nard
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Slump

Brisky
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

204—Nardine loam, 0 to 8 percent slopes

Composition

Nardine and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Nearly level areas near mountain meadows
Parent material: Alluvium mixed with loess in the upper part
Slope range: 0 to 8 percent
Elevation: 2,600 to 3,000 feet
Average annual precipitation: 22 to 28 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 145 to 175 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 4 inches—light brownish gray loam (surface layer)
4 to 17 inches—brown and light brownish gray loam (upper part of subsoil)
17 to 42 inches—grayish brown clay loam (middle part of subsoil)
42 to 60 inches—pale brown and light yellowish brown loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderately slow

Available water capacity: Very high
Seasonal high water table: Present in January through June with the highest level (1.4 to 2.9 feet) in March

Contrasting Inclusions

- Soils that are somewhat poorly drained (Aeric Fluvaquents)
- Soils that are poorly drained (Fluvaquents)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Stable

205—Nardmont loam, 3 to 30 percent slopes

Composition

Nardmont and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides and toeslopes that generally have a northerly, easterly, or westerly aspect
Parent material: Colluvium derived from schist mixed with volcanic ash and loess
Slope range: 3 to 30 percent
Elevation: 2,000 to 4,000 feet
Average annual precipitation: 40 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 2 inches—light brownish gray loam (surface layer)
2 to 15 inches—light brownish gray loam (subsurface layer)
15 to 60 inches—dark grayish brown loam and grayish brown gravelly loam (subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil and have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have volcanic ash to a depth of 24 inches (Tillicum)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Stable

206—Nardmont loam, 30 to 60 percent slopes

Composition

Nardmont and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Colluvium derived from schist mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,000 to 4,000 feet
Average annual precipitation: 40 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 2 inches—light brownish gray loam (surface layer)
2 to 15 inches—light brownish gray loam (subsurface layer)
15 to 60 inches—dark grayish brown loam and grayish brown gravelly loam (subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil and have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have volcanic ash to a depth of 24 inches (Tillicum)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Slump

207—Natapoc stony sandy loam, 3 to 30 percent slopes

Composition

Natapoc and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides and toeslopes
Parent material: Volcanic ash over glacial till
Slope range: 3 to 30 percent
Elevation: 1,500 to 2,400 feet
Average annual precipitation: 18 to 27 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—0.25 inch thick
  0 to 6 inches—pale brown stony sandy loam (surface layer when mixed)
  6 to 19 inches—very pale brown sandy loam (subsoil)
  19 to 60 inches—dense light gray very bouldery sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 19 inches and moderately slow below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more clay in the subsoil (Nard)
- Soils that are more than 35 percent pumice between depths of 9 and 48 inches (Choralmont)
- Soils that are volcanic ash to a depth of 42 inches and have an extremely gravelly coarse sand substratum (Chiwawa)
- Soils that are extremely cobbly loamy coarse sand between depths of 18 and 60 inches (Mippon)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

208—Natapoc stony sandy loam, 30 to 60 percent slopes

Composition

Natapoc and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash over glacial till
Slope range: 30 to 60 percent
Elevation: 1,500 to 2,400 feet
Average annual precipitation: 18 to 27 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.25 inch thick
0 to 6 inches—pale brown stony sandy loam (surface layer when mixed)
6 to 19 inches—very pale brown sandy loam (subsoil)
19 to 60 inches—dense light gray very bouldery sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 19 inches and moderately slow below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more clay in the subsoil (Nard)
- Soils that are volcanic ash to a depth of 42 inches and have an extremely gravelly coarse sand substratum (Chiwawa)
- Soils that are more than 35 percent pumice between depths of 9 and 48 inches (Choralmont)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Severe
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

209—Natapoc-Thow association, 30 to 60 percent slopes*

Composition

Natapoc and similar soils—45 percent
Thow and similar soils—30 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Natapoc—volcanic ash over glacial till; Thow—volcanic ash, pumice, and loess over glacial till

Slope range: 30 to 60 percent
Elevation: 1,500 to 2,400 feet
Average annual precipitation: 18 to 27 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Natapoc—42 to 44 degrees F (frigid); Thow—43 to 45 degrees F (frigid)
Growing season (28 degrees F): Natapoc—130 to 160 days; Thow—135 to 175 days
Frost-free season (32 degrees F): Natapoc—90 to 120 days; Thow—95 to 120 days
Rock fragments on surface: Natapoc—stones cover 1 to 3 percent

Soil Properties

Typical profile of Natapoc:
  Organic mat on surface—0.25 inch thick
  0 to 6 inches—pale brown stony sandy loam (surface layer when mixed)
  6 to 19 inches—very pale brown sandy loam (subsoil)
  19 to 60 inches—dense light gray very bouldery sandy loam (substratum)
Typical profile of Thow:
  Organic mat on surface—1 inch thick
  0 to 8 inches—light brownish gray cindery fine sandy loam (surface layer)
  8 to 22 inches—pale brown cindery sandy loam (upper part of subsoil)
  22 to 42 inches—light gray cindery coarse sandy loam (lower part of subsoil)
  42 to 60 inches—light gray extremely cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Natapoc—moderately rapid in the upper 19 inches and moderately slow below this depth; Thow—moderate in the upper 42 inches and very rapid below this depth
Available water capacity: Natapoc—moderately high; Thow—moderate

Contrasting Inclusions

- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Rock outcrop
- Rubble land

Operability Considerations

Natapoc
Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Severe
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Thow
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

210—Naxing very stony loam, 5 to 30 percent slopes

Composition

Naxing and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides and footslopes that have a northerly aspect
Parent material: Colluvium and residuum derived from basalt mixed with volcanic ash and loess
Slope range: 5 to 30 percent
Elevation: 4,600 to 6,800 feet
Average annual precipitation: 22 to 30 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 170 days
Frost-free season (32 degrees F): 70 to 110 days
Rock fragments on surface: Stones cover 3 to 5 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 10 inches—grayish brown very stony loam (surface layer)
10 to 29 inches—yellowish brown very cobbly loam and very cobbly sandy loam (subsoil)
29 to 60 inches—yellowish brown extremely cobbly loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Saydab)
- Soils that have more clay in the subsoil (Loneridge)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

211—Naxing very stony loam, 30 to 60 percent slopes

Composition

Naxing and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium derived from basalt mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 4,600 to 6,800 feet
Average annual precipitation: 22 to 30 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 170 days
Frost-free season (32 degrees F): 70 to 110 days
Rock fragments on surface: Stones cover 3 to 5 percent

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 10 inches—grayish brown very stony loam (surface layer)
  10 to 29 inches—yellowish brown very cobbly loam and very cobbly sandy loam (subsoil)
  29 to 60 inches—yellowish brown extremely cobbly loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Saydab)
- Soils that have more clay in the subsoil (Loneridge)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

212—Newbell bouldery sandy loam, 30 to 60 percent slopes

Composition

Newbell and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Glacial till and colluvium derived from granodiorite or schist with a mantle of volcanic ash
Slope range: 30 to 60 percent

Elevation: 2,200 to 3,500 feet
Average annual precipitation: 30 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 120 to 160 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Boulders cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—3 inches thick
  0 to 11 inches—yellowish brown bouldery sandy loam (surface layer when mixed)
  11 to 60 inches—pale brown and light olive brown very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a colder temperature regime (Chiwaukum)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

213—Nimue bouldery sandy loam, 60 to 90 percent slopes

Composition

Nimue and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from schist and gneiss with a mantle of volcanic ash
Slope range: 60 to 90 percent
Elevation: 4,500 to 5,500 feet
Average annual precipitation: 70 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Boulders and stones cover 2 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—1.5 inches thick
0 to 2 inches—gray bouldery sandy loam (subsurface layer)
2 to 14 inches—strong brown very cobbly loam (subsoil)
14 to 60 inches—yellowish brown and light olive brown very cobbly fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus and Chinkmin)
- Soils that have dense glacial till at a depth of 40 to 60 inches (Soda)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that have less rock fragments in the profile (Isella)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

214—Nimue cobbly fine sandy loam, 30 to 60 percent slopes

Composition

Nimue and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from schist and gneiss with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,100 to 5,500 feet
Average annual precipitation: 70 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—4 inches thick

0 to 7 inches—dark reddish brown and yellowish red cobbly fine sandy loam (upper part of subsoil when mixed)
7 to 14 inches—strong brown very cobbly silt loam (lower part of subsoil)
14 to 60 inches—dark brown and olive brown extremely stony sandy loam (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus and Chinkmin)
- Soils that have dense glacial till at a depth of 40 to 60 inches (Soda)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that have less rock fragments in the profile (Isella)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

215—Nimue-Rock outcrop complex, 45 to 90 percent slopes

Composition

Nimue and similar soils—60 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 45 to 90 percent
Elevation: 4,400 to 5,500 feet
Average annual precipitation: 70 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Boulders and stones cover 2 to 3 percent

Soil Properties

Typical profile of Nimue:
Organic mat on surface—1.5 inches thick
0 to 2 inches—gray bouldery sandy loam (subsurface layer)
2 to 14 inches—strong brown very cobbly loam (subsoil)

14 to 60 inches—yellowish brown and light olive brown very cobbly fine sandy loam (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Rock Outcrop

Kind of rock: Gneiss and schist

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have dense glacial till at a depth of 40 to 60 inches (Soda)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)

Operability Considerations

Nimue
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

216—Nimue association, 30 to 60 percent slopes*

Composition

Nimue and similar soils—40 percent
Nimue, dry, and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,100 to 5,500 feet
Average annual precipitation: 70 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Nimue, dry—boulders and stones cover 2 to 3 percent

Soil Properties

Typical profile of Nimue:
Organic mat on surface—4 inches thick
0 to 7 inches—dark reddish brown and yellowish red cobbly fine sandy loam (upper part of subsoil)
7 to 14 inches—strong brown very cobbly silt loam (lower part of subsoil)
14 to 60 inches—dark brown and olive brown extremely stony sandy loam (substratum)

Typical profile of Nimue, dry:
Organic mat on surface—1.5 inches thick
0 to 2 inches—gray bouldery sandy loam (subsurface layer)
2 to 14 inches—strong brown very cobbly loam (subsoil)
14 to 60 inches—yellowish brown and light olive brown very cobbly fine sandy loam (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus and Chinkmin)
- Soils that have dense glacial till at a depth of 40 to 60 inches (Soda)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that have less rock fragments in the profile (Isella)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

217—Nimue-Rock outcrop association, 45 to 90 percent slopes*

Composition

Nimue, dry, and similar soils—35 percent
Nimue and similar soils—30 percent
Rock outcrop—15 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 45 to 90 percent
Elevation: 4,400 to 5,500 feet
Average annual precipitation: 70 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Nimue, dry—boulders and stones cover 2 to 3 percent

Soil Properties

Typical profile of Nimue, dry:
Organic mat on surface—1.5 inches thick

0 to 2 inches—gray bouldery sandy loam (subsurface layer)
2 to 14 inches—strong brown very cobbly loam (subsoil)
14 to 60 inches—yellowish brown and light olive brown very cobbly fine sandy loam (substratum)

Typical profile of Nimue:
Organic mat on surface—4 inches thick
0 to 7 inches—dark reddish brown and yellowish red cobbly fine sandy loam (upper part of subsoil)
7 to 14 inches—strong brown very cobbly silt loam (lower part of subsoil)
14 to 60 inches—dark brown and olive brown extremely stony sandy loam (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Rock Outcrop

Kind of rock: Gneiss and schist

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have dense glacial till at a depth of 40 to 60 inches (Soda)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)

Operability Considerations

Nimue, dry, and Nimue
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

218—Oldbutte silt loam, 3 to 8 percent slopes

Composition

Oldbutte and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Bottomland
Parent material: Alluvium derived from sandstone
Slope range: 3 to 8 percent
Elevation: 1,900 to 3,000 feet
Average annual precipitation: 18 to 22 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 170 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
0 to 17 inches—dark grayish brown and grayish brown silt loam (surface layer)
17 to 36 inches—brown clay loam (subsoil)
36 to 60 inches—brown loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very high

Contrasting Inclusions

- Soils that are somewhat poorly drained (Aeric Fluvaquents)
- Soils that are very poorly drained or poorly drained (Fluvaquents)
- Soils that have a warmer temperature regime (Hyprairie)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft and sticky
Road rock: Not available
Cut and fill slope stability: Stable

219—Oldbutte silt loam, 45 to 65 percent slopes

Composition

Oldbutte and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes, of mountains, that generally have a northerly aspect
Parent material: Weathered sandstone mixed with loess in the upper part
Slope range: 45 to 65 percent
Elevation: 2,200 to 3,800 feet
Average annual precipitation: 18 to 22 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 170 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
0 to 17 inches—dark grayish brown and grayish brown silt loam (surface layer)
17 to 36 inches—brown clay loam (subsoil)
36 to 60 inches—brown loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very high

Contrasting Inclusions

- Soils that have a warmer temperature regime (Hyprairie and Yaxon)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft and sticky
Road rock: Not available
Cut and fill slope stability: Slump

220—Palmich cindery sandy loam, 15 to 30 percent slopes

Composition

Palmich and similar soils—90 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Footslopes and ridgetops of mountains
Parent material: Volcanic ash and pumice over colluvium derived from granodiorite or rhyolite
Slope range: 15 to 30 percent
Elevation: 2,500 to 3,500 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 130 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 4 inches—light gray cindery sandy loam (surface layer)
4 to 26 inches—light brownish gray very cindery sandy loam (upper part of subsoil)
26 to 44 inches—pale brown extremely cindery sandy loam (middle part of subsoil)
44 to 60 inches—very pale brown very gravelly sandy loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have less than 35 percent pumice to a depth of 30 inches (Bisping)
- Soils that have a very gravelly loamy coarse sand substratum (Domkey)
- Soils that are gravelly sandy loam throughout the profile (Dinkelman)
- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman)
- Soils that have more rock fragments in the subsoil (McCree)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

221—Palmich cindery sandy loam, 30 to 60 percent slopes

Composition

Palmich and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over colluvium derived from granodiorite or rhyolite
Slope range: 30 to 60 percent
Elevation: 2,300 to 5,200 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 130 days

Soil Properties

Typical profile:
  Organic mat on surface—2 inches thick
  0 to 4 inches—light gray cindery sandy loam (surface layer)
  4 to 26 inches—light brownish gray very cindery sandy loam (upper part of subsoil)
  26 to 44 inches—pale brown extremely cindery sandy loam (middle part of subsoil)
  44 to 60 inches—very pale brown very gravelly sandy loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have less than 35 percent pumice to a depth of 30 inches (Bisping)
- Soils that have a very gravelly loamy coarse sand substratum (Domkey)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman and Switchback)
- Soils that have more rock fragments in the subsoil (McCree)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight

Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

222—Palmich cindery sandy loam, 60 to 90 percent slopes

Composition

Palmich and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over colluvium derived from granodiorite or rhyolite
Slope range: 60 to 90 percent
Elevation: 2,300 to 4,900 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 130 days

Soil Properties

Typical profile:
  Organic mat on surface—2 inches thick
  0 to 4 inches—light gray cindery sandy loam (surface layer)
  4 to 26 inches—light brownish gray very cindery sandy loam (upper part of subsoil)
  26 to 44 inches—pale brown extremely cindery sandy loam (middle part of subsoil)
  44 to 60 inches—very pale brown very gravelly sandy loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Soils that have a very gravelly loamy coarse sand substratum (Domkey)
- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman and Switchback)
- Soils that have more rock fragments in the subsoil (McCree)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft

Road rock: Not available
Cut and fill slope stability: Slump

223—Palmich-McCree association, 30 to 60 percent slopes*

Composition

Palmich and similar soils—45 percent
McCree and similar soils—40 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Palmich—backslopes of mountains; McCree—mountainsides that have a southerly aspect
Parent material: Palmich—volcanic ash and pumice over colluvium derived from granodiorite or rhyolite; McCree—colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 2,300 to 5,200 feet
Average annual precipitation: Palmich—25 to 35 inches; McCree—20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Palmich—42 to 44 degrees F (frigid); McCree—43 to 45 degrees F (frigid)
Growing season (28 degrees F): Palmich—140 to 170 days; McCree—135 to 175 days
Frost-free season (32 degrees F): Palmich—90 to 130 days; McCree—90 to 120 days
Rock fragments on surface: McCree—stones cover 1 to 3 percent

Soil Properties

Typical profile of Palmich:
Organic mat on surface—2 inches thick
0 to 4 inches—light gray cindery sandy loam (surface layer)
4 to 26 inches—light brownish gray very cindery sandy loam (upper part of subsoil)
26 to 44 inches—pale brown extremely cindery sandy loam (middle part of subsoil)
44 to 60 inches—very pale brown very gravelly sandy loam (lower part of subsoil)
Typical profile of McCree:
Organic mat on surface—1 inch thick
0 to 5 inches—light brownish gray stony fine sandy loam (surface layer when mixed)
5 to 19 inches—very pale brown very stony fine sandy loam (subsoil)
19 to 36 inches—very pale brown extremely stony sandy loam (upper part of substratum)
36 to 56 inches—yellow extremely stony sandy loam (lower part of substratum)
56 to 60 inches—fractured unweathered rhyolite
Depth class: Palmich—very deep; McCree—deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Palmich—moderately high; McCree—low

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman and Switchback)

- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Soils that have a very gravelly loamy coarse sand substratum (Domkey)
- Rock outcrop

Operability Considerations

Palmich
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

McCree
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

224—Palmich-McCree-Rock outcrop association, 30 to 60 percent slopes*

Composition

Palmich and similar soils—30 percent
McCree and similar soils—30 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Palmich—backslopes of mountains; McCree—mountainsides that have a southerly aspect
Parent material: Palmich—volcanic ash and pumice over colluvium derived from granodiorite or rhyolite; McCree—colluvium derived from granodiorite or rhyolite mixed with volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 2,800 to 4,000 feet
Average annual precipitation: Palmich—25 to 35 inches; McCree—20 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Palmich—42 to 44 degrees F (frigid); McCree—43 to 45 degrees F (frigid)
Growing season (28 degrees F): Palmich—140 to 170 days; McCree—135 to 175 days
Frost-free season (32 degrees F): Palmich—90 to 130 days; McCree—90 to 120 days
Rock fragments on surface: McCree—stones cover 1 to 3 percent

Soil Properties

Typical profile of Palmich:
Organic mat on surface—2 inches thick

0 to 4 inches—light gray cindery sandy loam (surface layer)
4 to 26 inches—light brownish gray very cindery sandy loam (upper part of subsoil)
26 to 44 inches—pale brown extremely cindery sandy loam (middle part of subsoil)
44 to 60 inches—very pale brown very gravelly sandy loam (lower part of subsoil)

Typical profile of McCree:

Organic mat on surface—1 inch thick
0 to 5 inches—light brownish gray stony fine sandy loam (surface layer when mixed)
5 to 19 inches—very pale brown very stony fine sandy loam (subsoil)
19 to 36 inches—very pale brown extremely stony sandy loam (upper part of substratum)
36 to 56 inches—yellow extremely stony sandy loam (lower part of substratum)
56 to 60 inches—fractured unweathered rhyolite

Depth class: Palmich—very deep; McCree—deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Palmich—moderately high; McCree—low

Rock Outcrop

Kind of rock: Granodiorite or rhyolite

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman and Switchback)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Rubble land

Operability Considerations

Palmich
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

McCree
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

225—Palmich-Rock outcrop complex, 30 to 60 percent slopes

Composition

Palmich and similar soils—65 percent
Rock outcrop—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over colluvium derived from granodiorite or rhyolite
Slope range: 30 to 60 percent
Elevation: 2,800 to 4,000 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 90 to 130 days

Soil Properties

Typical profile of Palmich:
Organic mat on surface—2 inches thick
0 to 4 inches—light gray cindery sandy loam (surface layer)
4 to 26 inches—light brownish gray very cindery sandy loam (upper part of subsoil)
26 to 44 inches—pale brown extremely cindery sandy loam (middle part of subsoil)
44 to 60 inches—very pale brown very gravelly sandy loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Granodiorite or rhyolite

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman and Switchback)
- Soils that have more rock fragments in the subsoil (McCree)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Rubble land

Operability Considerations

Palmich
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

226—Palmont cobbly fine sandy loam, 30 to 60 percent slopes

Composition

Palmont and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium derived from rhyolite and granodiorite with a mantle of volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 2,200 to 4,800 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 45 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 5 inches—light brownish gray cobbly fine sandy loam (subsurface layer when mixed)
  5 to 11 inches—light brownish gray gravelly fine sandy loam (subsoil)
  11 to 24 inches—light gray very gravelly loamy sand (upper part of substratum)
  24 to 60 inches—light gray very gravelly loamy sand (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 24 inches and rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have more than 35 percent pumice between depths of 10 and 35 inches (Ramparter)
- Soils that have a colder temperature regime (Fears)
- Soils that have more than 35 percent pumice between depths of 4 and 44 inches (Palmich)
- Soils that have volcanic ash to a depth of 42 inches (Thow)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky

Road rock: Readily available
Cut and fill slope stability: Slump

227—Palmont cobbly fine sandy loam, 60 to 90 percent slopes

Composition

Palmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium derived from rhyolite and granodiorite with a mantle of volcanic ash and pumice
Slope range: 60 to 90 percent
Elevation: 2,200 to 4,800 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 45 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 5 inches—light brownish gray cobbly fine sandy loam (subsurface layer when mixed)
5 to 11 inches—light brownish gray gravelly fine sandy loam (subsoil)
11 to 24 inches—light gray very gravelly loamy sand (upper part of substratum)
24 to 60 inches—light gray very gravelly loamy sand (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 24 inches and rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have more than 35 percent pumice between depths of 10 and 35 inches (Ramparter)
- Soils that have a colder temperature regime (Fears)
- Soils that have more than 35 percent pumice between depths of 4 and 44 inches (Palmich)
- Soils that have volcanic ash to a depth of 42 inches (Thow)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Slump

228—Palmont very stony fine sandy loam, 30 to 60 percent slopes

Composition

Palmont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium derived from rhyolite and granodiorite with a mantle of volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 3,500 to 4,500 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 45 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Stones cover 3 to 15 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 3 inches—light brownish gray very stony fine sandy loam (surface layer)
3 to 10 inches—light yellowish brown cobbly sandy loam (upper part of subsoil)
10 to 25 inches—pale brown very stony coarse sandy loam (lower part of subsoil)
25 to 60 inches—very pale brown very gravelly loamy sand and very cobbly loamy coarse sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 25 inches and rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have more than 35 percent pumice between depths of 9 and 48 inches (Choralmont)
- Soils that have more than 35 percent pumice between depths of 4 and 44 inches (Palmich)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Slump

229—Palmont-Rock outcrop complex, 45 to 90 percent slopes

Composition

Palmont and similar soils—55 percent
Rock outcrop—30 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium derived from rhyolite and granodiorite with a mantle of volcanic ash and pumice
Slope range: 45 to 90 percent
Elevation: 2,500 to 4,800 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 45 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days

Soil Properties

Typical profile of Palmont:
  Organic mat on surface—0.5 inch thick
  0 to 5 inches—light brownish gray cobbly fine sandy loam (subsurface layer when mixed)
  5 to 11 inches—light brownish gray cobbly fine sandy loam (subsoil)
  11 to 24 inches—light gray very gravelly loamy sand (upper part of substratum)
  24 to 60 inches—light gray very gravelly loamy sand (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 24 inches and rapid below this depth
Available water capacity: Moderate

Rock Outcrop

Kind of rock: Granodiorite and rhyolite

Contrasting Inclusions

- Soils that have volcanic ash to a depth of 42 inches (Thow)
- Soils that have more than 35 percent pumice between depths of 9 and 48 inches (Palmich)

Operability Considerations

Palmont
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Slump

230—Ramparter stony sandy loam, 30 to 60 percent slopes

Composition

Ramparter and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Volcanic ash and pumice mixed with colluvium and glacial till
Slope range: 30 to 60 percent
Elevation: 3,500 to 5,000 feet
Average annual precipitation: 30 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 135 to 170 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 11 inches—light gray stony sandy loam (upper part of subsoil)
11 to 20 inches—pale brown very cindery sandy loam (middle part of subsoil)
20 to 60 inches—very pale brown and white cinders (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 20 inches and rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have a colder temperature regime (Wedge)
- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Stable

231—Ramparter stony sandy loam, till substratum, 5 to 30 percent slopes

Composition

Ramparter and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice over glacial till
Slope range: 5 to 30 percent
Elevation: 2,500 to 4,800 feet
Average annual precipitation: 30 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 165 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—2 inches thick
  0 to 2 inches—light brownish gray stony sandy loam (subsurface layer)
  2 to 14 inches—light gray very cindery sandy loam (upper part of subsoil)
  14 to 50 inches—stratified, yellow, pale yellow, and white cinders (lower part of subsoil)
  50 to 60 inches—very pale brown gravelly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 14 inches and rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have a very cobbly sandy loam subsoil (Zeb)
- Soils that are dominantly sand throughout the profile (Angle)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Stable

232—Ramparter stony sandy loam, till substratum, 30 to 60 percent slopes

Composition

Ramparter and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,500 to 4,800 feet

Average annual precipitation: 30 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 165 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 2 inches—light brownish gray stony sandy loam (subsurface layer)
2 to 14 inches—light gray very cindery sandy loam (upper part of subsoil)
14 to 50 inches—stratified, yellow, pale yellow, and white cinders (lower part of subsoil)
50 to 60 inches—very pale brown gravelly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 14 inches and rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Soils that are dominantly sand throughout the profile (Angle)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Slump

233—Ramparter stony sandy loam, till substratum, 60 to 90 percent slopes

Composition

Ramparter and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice over glacial till
Slope range: 60 to 90 percent
Elevation: 3,600 to 4,600 feet
Average annual precipitation: 30 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 165 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—2 inches thick
  0 to 2 inches—light brownish gray stony sandy loam (subsurface layer)
  2 to 14 inches—light gray very cindery sandy loam (upper part of subsoil)
  14 to 50 inches—stratified, yellow, pale yellow, and white cinders (lower part of subsoil)
  50 to 60 inches—very pale brown gravelly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 14 inches and rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Soils that are dominantly sand throughout the profile (Angle)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Slump

234—Ramparter very fine sandy loam, 5 to 30 percent slopes

Composition

Ramparter and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice
Slope range: 5 to 30 percent
Elevation: 2,500 to 5,600 feet
Average annual precipitation: 30 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 130 to 165 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 6 inches—light gray very fine sandy loam (surface layer when mixed)
  6 to 15 inches—very pale brown very cindery fine sandy loam and very cindery sandy loam (upper part of subsoil)

15 to 53 inches—multicolored cinders and sand (middle part of subsoil)
53 to 60 inches—very pale brown sandy loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 15 inches and rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Stable

235—Ramparter very fine sandy loam, 30 to 60 percent slopes

Composition

Ramparter and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 2,500 to 5,600 feet
Average annual precipitation: 30 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 130 to 165 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 6 inches—light gray very fine sandy loam (surface layer when mixed)
6 to 15 inches—very pale brown very cindery fine sandy loam and very cindery sandy loam (upper part of subsoil)
15 to 53 inches—multicolored cinders and sand (middle part of subsoil)
53 to 60 inches—very pale brown sandy loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 15 inches and rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Wilma)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Slump

236—Ramparter-Wilma complex, 30 to 60 percent slopes

Composition

Ramparter and similar soils—50 percent
Wilma and similar soils—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ramparter—concave areas on mountainsides; Wilma—convex areas of spur ridges on mountainsides
Parent material: Ramparter—volcanic ash and pumice mixed with colluvium and glacial till; Wilma—residuum and colluvium derived from granitic rock with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,500 to 5,800 feet
Average annual precipitation: 30 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Ramparter—42 to 45 degrees F (frigid); Wilma—43 to 45 degrees F (frigid)
Growing season (28 degrees F): Ramparter—135 to 170 days; Wilma—130 to 175 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Ramparter and Wilma—stones cover 1 to 3 percent

Soil Properties

Typical profile of Ramparter:
Organic mat on surface—0.5 inch thick
0 to 11 inches—light gray stony sandy loam (upper part of subsoil)
11 to 20 inches—pale brown very cindery sandy loam (middle part of subsoil)
20 to 60 inches—very pale brown and white cinders (lower part of subsoil)
Typical profile of Wilma:
0 to 4 inches—grayish brown stony fine sandy loam (surface layer)
4 to 12 inches—brown gravelly sandy loam (upper part of subsoil)
12 to 24 inches—light yellowish brown very gravelly fine sandy loam (lower part of subsoil)
24 to 37 inches—brownish yellow very gravelly loamy sand (substratum)
37 to 41 inches—unweathered granite

Depth class: Ramparter—very deep; Wilma—moderately deep
Drainage class: Well drained
Permeability: Ramparter—moderate in the upper 20 inches and rapid below this depth; Wilma—moderate in the upper 24 inches and moderately rapid below this depth
Available water capacity: Ramparter—moderately high; Wilma—low

Contrasting Inclusions

- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Soils that are less than 35 percent pumice to a depth of 42 inches (Thow)
- Soils that are extremely stony sandy loam between depths of 19 and 60 inches (McCree)
- Rock outcrop

Operability Considerations

Ramparter
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Stable

Wilma
Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Slump

237—Reggad extremely stony muck, 45 to 90 percent slopes

Composition

Reggad and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Admixture of volcanic ash and organic material over rubble
Slope range: 45 to 90 percent
Elevation: 3,300 to 5,600 feet
Average annual precipitation: 70 to 120 inches
Average annual air temperature: 38 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Stones and boulders cover 15 to 25 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 9 inches—very dark gray and very dark grayish brown extremely stony muck (surface layer)
9 to 60 inches—angular rock fragments
Depth class: Very deep
Drainage class: Excessively drained
Permeability: Moderate in the upper 9 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that have an extremely stony sandy loam substratum between depths of 16 and 60 inches (Nimue)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

238—Reggad-Serene association, 45 to 90 percent slopes

Composition

Reggad and similar soils—40 percent
Serene and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Reggad—admixture of volcanic ash and organic material over rubble; Serene—volcanic ash mixed with colluvium derived from granite and granodiorite
Slope range: 45 to 90 percent
Elevation: 3,300 to 5,600 feet
Average annual precipitation: 70 to 120 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 38 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days
Rock fragments on surface: Reggad—stones and boulders cover 15 to 25 percent

Soil Properties

Typical profile of Reggad:
Organic mat on surface—1 inch thick
0 to 9 inches—very dark gray and very dark grayish brown extremely stony muck (surface layer)
9 to 60 inches—angular rock fragments
Typical profile of Serene:
Organic mat on surface—2 inches thick
0 to 4 inches—brown gravelly sandy loam (surface layer when mixed)
4 to 8 inches—reddish yellow gravelly sandy loam (upper part of subsoil)
8 to 13 inches—reddish yellow cobbly sandy loam (lower part of subsoil)
13 to 24 inches—light yellowish brown very cobbly loamy coarse sand (substratum)
24 to 34 inches—weathered granodiorite
Depth class: Reggad—very deep; Serene—moderately deep
Drainage class: Reggad—excessively drained; Serene—well drained
Permeability: Reggad—moderate in the upper 9 inches and very rapid below this depth; Serene—moderate in the upper 8 inches and moderately rapid and rapid below this depth
Available water capacity: Reggad—moderately high; Serene—very low

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have an extremely stony sandy loam substratum between depths of 16 and 60 inches (Nimue)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

239—Rock outcrop

Composition

Rock outcrop—90 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Mountaintops, escarpments, mountainsides, and ridgetops
Slope range: 0 to 120 percent
Elevation: 1,000 to 9,600 feet
Kind of rock: Igneous, sedimentary, and metamorphic

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen, Blewett, and Chumstick)
- Areas of ice and compact snow (Glaciers, snowfields)

240—Rock outcrop-Blewett complex, 30 to 60 percent slopes

Composition

Rock outcrop—50 percent
Blewett and similar soils—25 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Residuum and colluvium derived from sandstone mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 3,600 to 5,800 feet
Average annual precipitation: 22 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 130 to 170 days
Frost-free season (32 degrees F): 90 to 130 days

Rock Outcrop

Kind of rock: Sandstone

Soil Properties

Typical profile of Blewett:
  Organic mat on surface—0.5 inch thick
  0 to 3 inches—brown very gravelly sandy loam (surface layer)
  3 to 10 inches—yellowish brown extremely gravelly sandy loam (subsoil)
  10 to 14 inches—unweathered sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Soils that have more clay in the subsoil and are very deep (Nard)

Operability Considerations

Blewett
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

241—Rock outcrop-Borland complex, 45 to 90 percent slopes

Composition

Rock outcrop—50 percent

Borland and similar soils—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Residuum and colluvium derived from sandstone mixed with loess
Slope range: 45 to 90 percent
Elevation: 1,800 to 3,800 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 48 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 135 to 165 days

Rock Outcrop

Kind of rock: Sandstone

Soil Properties

Typical profile of Borland:
  0 to 6 inches—grayish brown and brown loam (surface layer)
  6 to 11 inches—yellowish brown clay loam (subsoil)
  11 to 15 inches—unweathered sandstone
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Very low

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches and have a colder temperature regime (Cle Elum)
- Soils that have bedrock at a depth of 20 to 40 inches and receive less rainfall (Bjork)

Development Limitations

Borland
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

242—Rock outcrop-Chumstick-Icicle complex, 45 to 90 percent slopes

Composition

Rock outcrop—40 percent
Chumstick and similar soils—25 percent
Icicle and similar soils—15 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Chumstick and Icicle—colluvium derived from granite and granodiorite mixed with volcanic ash and loess

Slope range: 45 to 90 percent
Elevation: 2,000 to 5,000 feet
Average annual precipitation: Chumstick—28 to 32 inches; Icicle—28 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): Chumstick—90 to 120 days; Icicle—100 to 130 days
Rock fragments on surface: Chumstick—stones cover 1 to 3 percent; Icicle—boulders and stones cover 5 to 15 percent

Rock Outcrop

Kind of rock: Granite and granodiorite

Soil Properties

Typical profile of Chumstick:
0 to 4 inches—brown stony sandy loam (surface layer)
4 to 14 inches—brown very stony sandy loam (upper part of subsoil)
14 to 19 inches—brown extremely stony sandy loam (lower part of subsoil)
19 to 23 inches—unweathered granite
Typical profile of Icicle:
Organic mat on surface—0.5 inch thick
0 to 8 inches—dark grayish brown very bouldery sandy loam (surface layer)
8 to 28 inches—pale brown very gravelly sandy loam (subsoil)
28 to 50 inches—very pale brown very cobbly sandy loam (substratum)
50 to 54 inches—unweathered granite
Depth class: Chumstick—shallow; Icicle—deep
Drainage class: Well drained
Permeability: Chumstick—moderately rapid; Icicle—moderate
Available water capacity: Chumstick—very low; Icicle—low

Contrasting Inclusions

- Soils that are volcanic ash to a depth of 26 inches over an extremely stony coarse sandy loam substratum (Chiwaukum)

Operability Considerations

Chumstick
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Icicle
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

243—Rock outcrop-Chumstick-Icicle association, 45 to 90 percent slopes*

Composition

Rock outcrop—40 percent
Chumstick and similar soils—20 percent
Icicle and similar soils—15 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: All aspects of mountainsides
Parent material: Chumstick and Icicle—colluvium derived from granite and granodiorite mixed with volcanic ash and loess
Slope range: 45 to 90 percent
Elevation: 2,000 to 5,000 feet
Average annual precipitation: Chumstick—28 to 32 inches; Icicle—28 to 50 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): Chumstick—90 to 120 days; Icicle—100 to 130 days
Rock fragments on surface: Chumstick—stones cover 1 to 3 percent; Icicle—boulders and stones cover 5 to 15 percent

Rock Outcrop

Kind of rock: Granite and granodiorite

Soil Properties

Typical profile of Chumstick:
  0 to 4 inches—brown stony sandy loam (surface layer)
  4 to 14 inches—brown very stony sandy loam (upper part of subsoil)
  14 to 19 inches—brown extremely stony sandy loam (lower part of subsoil)
  19 to 23 inches—unweathered granite
Typical profile of Icicle:
  Organic mat on surface—0.5 inch thick
  0 to 8 inches—dark grayish brown very bouldery sandy loam (surface layer)
  8 to 28 inches—pale brown very gravelly sandy loam (subsoil)
  28 to 50 inches—very pale brown very cobbly sandy loam (substratum)
  50 to 54 inches—unweathered granite
Depth class: Chumstick—shallow; Icicle—deep
Drainage class: Well drained
Permeability: Chumstick—moderately rapid; Icicle—moderate
Available water capacity: Chumstick—very low; Icicle—low

Contrasting Inclusions

- Soils that are volcanic ash to a depth of 26 inches over an extremely stony coarse sandy loam substratum (Chiwaukum)

Operability Considerations

Chumstick
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate

Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Icicle
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

244—Rock outcrop-Rubble land-Glaciers, snowfields complex

Composition

Rock outcrop—60 percent
Rubble land—20 percent
Glaciers, snowfields—15 percent
Contrasting inclusions—5 percent

Map Unit Characteristics

Position on landscape: Rock outcrop—mountainsides, mountaintops, ridgetops, and cirque headwalls; Rubble land—mountainsides and cirque basins and headwalls; Glaciers, snowfields—mountainsides and cirque basins that have a northerly aspect
Slope range: 0 to 120 percent
Elevation: 6,000 to 9,600 feet
Kind of material: Rock outcrop—igneous and metamorphic rock; Rubble land—loose fragmental igneous and metamorphic rock; Glaciers, snowfields—perennial icefields, snowfields, and glaciers

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Soils that have an extremely stony sandy loam substratum (Nimue)
- Soils that are volcanic ash to a depth of 23 inches (Almac)

245—Rock outcrop-Rubble land-Serene complex, 45 to 90 percent slopes

Composition

Rock outcrop—35 percent
Rubble land—25 percent
Serene and similar soils—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash mixed with colluvium derived from granite and granodiorite

Slope range: 45 to 90 percent
Elevation: 4,600 to 5,500 feet
Average annual precipitation: 75 to 120 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Rock Outcrop

Kind of rock: Granite and granodiorite

Rubble Land

Kind of material: Loose fragmental granite and granodiorite

Soil Properties

Typical profile of Serene:
  Organic mat on surface—2 inches thick
  0 to 4 inches—brown gravelly sandy loam (surface layer when mixed)
  4 to 8 inches—reddish yellow gravelly sandy loam (upper part of subsoil)
  8 to 13 inches—reddish yellow cobbly sandy loam (lower part of subsoil)
  13 to 24 inches—light yellowish brown very cobbly loamy coarse sand (substratum)
  24 to 34 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate in the upper 8 inches and moderately rapid and rapid below this depth
Available water capacity: Very low

Contrasting Inclusions

- Soils that are very deep (Alnult)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Chinkmin)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)

Operability Considerations

Serene
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

246—Rubble land-Rock outcrop complex

Composition

Rubble land—65 percent
Rock outcrop—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides

Slope range: 30 to 120 percent
Elevation: 2,000 to 9,000 feet
Kind of rock: Rubble land—loose fragmental igneous, sedimentary, and metamorphic rock; Rock outcrop—igneous, sedimentary, and metamorphic rock

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Serene and Saydab)
- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)

247—Safety stony sandy loam, 8 to 30 percent slopes

Composition

Safety and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ridges and saddles of mountains
Parent material: Residuum derived from granite mixed with volcanic ash and loess
Slope range: 8 to 30 percent
Elevation: 1,700 to 3,800 feet
Average annual precipitation: 15 to 25 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 46 to 48 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Stones and boulders cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 3 inches—grayish brown stony sandy loam (upper part of surface layer)
3 to 11 inches—brown sandy loam (lower part of surface layer)
11 to 24 inches—pale brown sandy loam (subsoil)
24 to 34 inches—weathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have bedrock at a depth of 40 to 60 inches (Dinkelman)
- Soils that have a very stony fine sandy loam subsoil (McCree)
- Soils that have more than 35 percent pumice to a depth of 44 inches (Palmich)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Stable

248—Safety stony sandy loam, 30 to 60 percent slopes

Composition

Safety and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Residuum and colluvium derived from granite mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 1,700 to 3,800 feet
Average annual precipitation: 15 to 25 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 46 to 48 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Stones and boulders cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 3 inches—grayish brown stony sandy loam (upper part of surface layer)
3 to 11 inches—brown sandy loam (lower part of surface layer)
11 to 24 inches—pale brown sandy loam (subsoil)
24 to 34 inches—weathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have more than 35 percent pumice to a depth of 44 inches (Palmich)
- Soils that have a very stony fine sandy loam subsoil (McCree)
- Soils that have bedrock at a depth of 40 to 60 inches (Dinkelman)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

249—Safety stony sandy loam, 60 to 90 percent slopes

Composition

Safety and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect

Parent material: Residuum and colluvium derived from granite mixed with volcanic ash and loess
Slope range: 60 to 90 percent
Elevation: 1,700 to 3,800 feet
Average annual precipitation: 15 to 25 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 46 to 48 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Stones and boulders cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 3 inches—grayish brown stony sandy loam (upper part of surface layer)
3 to 11 inches—brown sandy loam (lower part of surface layer)
11 to 24 inches—pale brown sandy loam (subsoil)
24 inches—weathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have a very stony fine sandy loam subsoil (McCree)
- Soils that have bedrock at a depth of 40 to 60 inches (Dinkelman)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

250—Safety-Rock outcrop complex, 30 to 60 percent slopes

Composition

Safety and similar soils—70 percent
Rock outcrop—15 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Residuum and colluvium derived from granite mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,000 to 3,800 feet
Average annual precipitation: 15 to 25 inches

Snowpack: More than 1 foot in December through February
Average annual air temperature: 46 to 48 degrees F (mesic)
Growing season (28 degrees F): 140 to 180 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Stones and boulders cover 1 to 3 percent

Soil Properties

Typical profile of Safety:
- 0 to 3 inches—grayish brown stony sandy loam (upper part of surface layer)
- 3 to 11 inches—brown sandy loam (lower part of surface layer)
- 11 to 24 inches—pale brown sandy loam (subsoil)
- 24 to 34 inches—weathered granite

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Rock Outcrop

Kind of rock: Granite and granodiorite

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 40 to 60 inches (Dinkelman)
- Soils that have a very stony fine sandy loam subsoil (McCree)

Operability Considerations

Safety
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

251—Saska stony sandy loam, 3 to 30 percent slopes

Composition

Saska and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides and footslopes that have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,200 to 4,200 feet
Average annual precipitation: 40 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 6 inches—brown stony sandy loam (surface layer when mixed)
6 to 16 inches—light yellowish brown sandy loam (subsoil)
16 to 60 inches—light brownish gray and light gray very stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a colder temperature regime (Chiwaukum)
- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

252—Saska stony sandy loam, 30 to 60 percent slopes

Composition

Saska and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,200 to 4,200 feet
Average annual precipitation: 35 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 6 inches—brown stony sandy loam (surface layer when mixed)
6 to 16 inches—light yellowish brown sandy loam (subsoil)
16 to 60 inches—light brownish gray and light gray very stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained

Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have a colder temperature regime (Chiwaukum)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

253—Saska bouldery sandy loam, 3 to 30 percent slopes

Composition

Saska and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides and valley terraces that have a southerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 45 to 65 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 4 inches—brown bouldery sandy loam (surface layer)
4 to 10 inches—yellowish brown sandy loam (upper part of subsoil)
10 to 28 inches—light yellowish brown gravelly sandy loam (lower part of subsoil)
28 to 36 inches—pale brown gravelly sandy loam (upper part of substratum)
36 to 60 inches—light brownish gray and light gray very cobbly sandy loam (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a colder temperature regime (Soda and Vabus)
- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

254—Saska bouldery sandy loam, 30 to 60 percent slopes

Composition

Saska and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,000 to 4,200 feet
Average annual precipitation: 45 to 65 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 140 to 170 days
Frost-free season (32 degrees F): 100 to 130 days
Rock fragments on surface: Boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 4 inches—brown bouldery sandy loam (surface layer)
  4 to 10 inches—yellowish brown sandy loam (upper part of subsoil)
  10 to 28 inches—light yellowish brown gravelly sandy loam (lower part of subsoil)
  28 to 36 inches—pale brown gravelly sandy loam (upper part of substratum)
  36 to 60 inches—light brownish gray and light gray very cobbly sandy loam (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have a colder temperature regime and have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft

Road rock: Readily available
Cut and fill slope stability: Slump

255—Saska very bouldery sandy loam, 3 to 30 percent slopes

Composition

Saska and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides and footslopes that have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,200 to 4,000 feet
Average annual precipitation: 40 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Boulders cover 10 to 15 percent

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 9 inches—brown very bouldery sandy loam (surface layer)
  9 to 19 inches—light yellowish brown gravelly sandy loam (subsoil)
  19 to 60 inches—very pale brown and light gray extremely stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a colder temperature regime (Chiwaukum)
- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

256—Saska very bouldery sandy loam, 30 to 60 percent slopes

Composition

Saska and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,200 to 4,200 feet
Average annual precipitation: 35 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Boulders cover 10 to 15 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 9 inches—brown very bouldery sandy loam (surface layer)
9 to 19 inches—light yellowish brown gravelly sandy loam (subsoil)
19 to 60 inches—very pale brown and light gray extremely stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a colder temperature regime (Chiwaukum)
- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

257—Saska-Rock outcrop complex, 30 to 60 percent slopes

Composition

Saska and similar soils—65 percent
Rock outcrop—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,400 to 4,200 feet
Average annual precipitation: 45 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 39 to 42 degrees F (frigid)

Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of Saska:
Organic mat on surface—2 inches thick
0 to 6 inches—brown stony sandy loam (surface layer when mixed)
6 to 16 inches—light yellowish brown sandy loam (subsoil)
16 to 60 inches—light brownish gray and light gray very stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Rock Outcrop

Kind of rock: Granodiorite, schist, and gneiss

Contrasting Inclusions

- Soils that have a colder temperature regime (Chiwaukum and Almac)
- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Rubble land

Operability Considerations

Saska
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

258—Saska association, 3 to 30 percent slopes*

Composition

Saska and similar soils—40 percent
Saska, bouldery, and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides and footslopes that have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,200 to 4,200 feet
Average annual precipitation: 40 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Saska—stones cover 1 to 3 percent; Saska, bouldery—boulders cover 10 to 15 percent

Soil Properties

Typical profile of Saska:
Organic mat on surface—2 inches thick
0 to 6 inches—brown stony sandy loam (surface layer when mixed)
6 to 16 inches—light yellowish brown sandy loam (subsoil)
16 to 60 inches—light brownish gray and light gray very stony sandy loam (substratum)

Typical profile of Saska, bouldery:
Organic mat on surface—1 inch thick
0 to 9 inches—brown very bouldery sandy loam (surface layer)
9 to 19 inches—light yellowish brown gravelly sandy loam (subsoil)
19 to 60 inches—very pale brown and light gray extremely stony sandy loam (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a colder temperature regime (Chiwaukum)
- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Rock outcrop
- Rubble land

Operability Considerations

Saska
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

Saska, bouldery
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

259—Saska association, 3 to 30 percent south slopes*

Composition

Saska, south, and similar soils—40 percent
Saska and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Saska, south—mountainsides and valley terraces that have a southerly aspect; Saska—mountainsides and footslopes that have a northerly aspect

Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: Saska, south—45 to 65 inches; Saska—40 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Saska, south—43 to 45 degrees F (frigid); Saska—41 to 43 degrees F (frigid)
Growing season (28 degrees F): Saska, south—140 to 170 days; Saska—120 to 150 days
Frost-free season (32 degrees F): Saska, south—100 to 130 days; Saska—80 to 110 days
Rock fragments on surface: Saska, south—boulders and stones cover 1 to 3 percent; Saska—boulders cover 10 to 15 percent

Soil Properties

Typical profile of Saska, south:
Organic mat on surface—0.5 inch thick
0 to 4 inches—brown bouldery sandy loam (surface layer)
4 to 28 inches—yellowish brown sandy loam and light yellowish brown gravelly sandy loam (subsoil)
28 to 36 inches—pale brown gravelly sandy loam (upper part of substratum)
36 to 60 inches—light brownish gray and light gray very cobbly sandy loam (lower part of substratum)
Typical profile of Saska:
Organic mat on surface—1 inch thick
0 to 9 inches—brown very bouldery sandy loam (surface layer)
9 to 19 inches—light yellowish brown gravelly sandy loam (subsoil)
19 to 60 inches—very pale brown and light gray extremely stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Saska, south—moderately high; Saska—moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have a colder temperature regime (Soda and Vabus)
- Rock outcrop
- Rubble land

Operability Considerations

Saska, south
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

Saska
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate

Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

260—Saska association, 30 to 60 percent slopes*

Composition

Saska and similar soils—40 percent
Saska, bouldery, and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,200 to 4,200 feet
Average annual precipitation: Saska—35 to 60 inches; Saska, bouldery—40 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Saska—stones cover 1 to 3 percent; Saska, bouldery—boulders cover 10 to 15 percent

Soil Properties

Typical profile of Saska:
Organic mat on surface—2 inches thick
0 to 6 inches—brown stony sandy loam (surface layer when mixed)
6 to 16 inches—light yellowish brown sandy loam (subsoil)
16 to 60 inches—light brownish gray and light gray very stony sandy loam (substratum)
Typical profile of Saska, bouldery:
Organic mat on surface—1 inch thick
0 to 9 inches—brown very bouldery sandy loam (surface layer)
9 to 19 inches—light yellowish brown gravelly sandy loam (subsoil)
19 to 60 inches—very pale brown and light gray extremely stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have a colder temperature regime (Chiwaukum)
- Rock outcrop
- Rubble land

Operability Considerations

Saska
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

Saska, bouldery
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

261—Saska-Rock outcrop association, 30 to 60 percent slopes*

Composition

Saska and similar soils—35 percent
Saska, bouldery, and similar soils—30 percent
Rock outcrop—15 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,400 to 4,200 feet
Average annual precipitation: Saska—45 to 60 inches; Saska, bouldery—40 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Saska—39 to 42 degrees F (frigid); Saska, bouldery—41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Saska—stones cover 1 to 3 percent; Saska, bouldery—boulders cover 10 to 15 percent

Soil Properties

Typical profile of Saska:
- Organic mat on surface—2 inches thick
- 0 to 6 inches—brown stony sandy loam (surface layer when mixed)
- 6 to 16 inches—light yellowish brown sandy loam (subsoil)
- 16 to 60 inches—light brownish gray and light gray very stony sandy loam (substratum)

Typical profile of Saska, bouldery:
- Organic mat on surface—1 inch thick
- 0 to 9 inches—brown very bouldery sandy loam (surface layer)
- 9 to 19 inches—light yellowish brown gravelly sandy loam (subsoil)
- 19 to 60 inches—very pale brown and light gray extremely stony sandy loam (substratum)

Depth class: Very deep
Drainage class: Well drained

Permeability: Moderate
Available water capacity: Moderate

Rock Outcrop

Kind of rock: Granodiorite, schist, and gneiss

Contrasting Inclusions

- Soils that have a colder temperature regime (Chiwaukum and Almac)
- Rubble land

Operability Considerations

Saska
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

Saska, bouldery
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

262—Saska, south-Rock outcrop association, 30 to 60 percent slopes*

Composition

Saska, south, and similar soils—35 percent
Saska and similar soils—30 percent
Rock outcrop—15 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Saska, south—mountainsides that have a southerly aspect; Saska—mountainsides that have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,000 to 4,200 feet
Average annual precipitation: Saska, south—45 to 65 inches; Saska—35 to 60 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Saska, south—43 to 45 degrees F (frigid); Saska—41 to 43 degrees F (frigid)
Growing season (28 degrees F): Saska, south—140 to 170 days; Saska—120 to 150 days
Frost-free season (32 degrees F): Saska, south—100 to 130 days; Saska—80 to 110 days

Rock fragments on surface: Saska, south—boulders and stones cover 1 to 3 percent; Saska—stones cover 1 to 3 percent

Soil Properties

Typical profile of Saska, south:
Organic mat on surface—0.5 inch thick
0 to 4 inches—brown bouldery sandy loam (surface layer)
4 to 10 inches—yellowish brown sandy loam
10 to 28 inches—yellowish brown gravelly sandy loam (subsoil)
28 to 36 inches—pale brown gravelly sandy loam (upper part of substratum)
36 to 60 inches—light brownish gray and light gray very cobbly sandy loam (lower part of substratum)
Typical profile of Saska:
Organic mat on surface—2 inches thick
0 to 6 inches—brown stony sandy loam (surface layer when mixed)
6 to 16 inches—light yellowish brown sandy loam (subsoil)
16 to 60 inches—light brownish gray and light gray very stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Saska, south—moderately high; Saska—moderate

Rock Outcrop

Kind of rock: Granodiorite, schist, and gneiss

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have a colder temperature regime (Soda and Vabbing)
- Rubble land

Operability Considerations

Saska, south
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

Saska
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

263—Saydab extremely stony loam, 3 to 30 percent slopes

Composition

Saydab and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Broad ridgetops and mountain summits
Parent material: Volcanic ash and loess mixed with residuum and colluvium derived from basalt
Slope range: 3 to 30 percent
Elevation: 5,500 to 6,200 feet
Average annual precipitation: 25 to 35 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 65 to 100 days
Rock fragments on surface: Stones cover 25 to 35 percent

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 8 inches—dark grayish brown extremely stony loam (surface layer)
  8 to 27 inches—yellowish brown and light yellowish brown very cobbly loam (subsoil)
  27 to 38 inches—light yellowish brown very cobbly loam (substratum)
  38 to 42 inches—unweathered basalt
Depth class: Moderately deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that are very deep (Naxing)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

264—Scotties gravelly loam, 30 to 60 percent slopes

Composition

Scotties and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium and residuum derived from sandstone with a thin mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,000 to 4,800 feet
Average annual precipitation: 22 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 140 to 165 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 10 inches—pale brown gravelly loam (upper part of subsoil)
10 to 18 inches—light yellowish brown gravelly loam (lower part of subsoil)
18 to 30 inches—yellowish brown very gravelly loam (upper part of substratum)
30 to 44 inches—light yellowish brown extremely cobbly sandy loam (lower part of substratum)
44 to 48 inches—unweathered sandstone
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Blewett and Brisky)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

265—Serene gravelly sandy loam, 30 to 60 percent slopes

Composition

Serene and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Ridgetops and mountainsides

Parent material: Volcanic ash mixed with colluvium derived from granite and granodiorite
Slope range: 30 to 60 percent
Elevation: 3,600 to 5,500 feet
Average annual precipitation: 70 to 120 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 4 inches—brown gravelly sandy loam (surface layer when mixed)
4 to 8 inches—reddish yellow gravelly sandy loam (upper part of subsoil)
8 to 13 inches—reddish yellow cobbly sandy loam (lower part of subsoil)
13 to 24 inches—light yellowish brown very cobbly loamy coarse sand (substratum)
24 to 34 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate in the upper 8 inches and moderately rapid and rapid below this depth
Available water capacity: Very low

Contrasting Inclusions

- Soils that consist of angular rock fragments (Reggad)
- Soils that are extremely stony sandy loam between depths of 16 and 60 inches (Nimue)
- Soils that have a very stony fine sandy loam subsoil and are very deep (Alnult)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

266—Serene-Rock outcrop complex, 45 to 90 percent slopes

Composition

Serene, dry, and similar soils—60 percent
Rock outcrop—25 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Ridgetops and mountainsides
Parent material: Volcanic ash mixed with colluvium derived from granite and granodiorite

Slope range: 45 to 90 percent
Elevation: 3,600 to 5,500 feet
Average annual precipitation: 70 to 120 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile of Serene:
Organic mat on surface—2 inches thick
0 to 4 inches—strong brown gravelly sandy loam (surface layer when mixed)
4 to 8 inches—reddish yellow gravelly sandy loam (upper part of subsoil)
8 to 13 inches—reddish yellow cobbly sandy loam (lower part of subsoil)
13 to 24 inches—light yellowish brown very cobbly loamy coarse sand (substratum)
24 to 34 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate in the upper 8 inches and moderately rapid and rapid below this depth
Available water capacity: Very low

Rock Outcrop

Kind of rock: Granite and granodiorite

Contrasting Inclusions

- Soils that consist of angular rock fragments (Reggad)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have a very stony fine sandy loam subsoil and are very deep (Alnult)
- Soils that are extremely stony sandy loam between depths of 16 and 60 inches (Nimue)
- Rubble land

Operability Considerations

Serene
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

267—Serpen very gravelly loam, 15 to 30 percent slopes

Composition

Serpen and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect

Parent material: Residuum and colluvium derived from serpentine with minor amounts of volcanic ash and loess
Slope range: 15 to 30 percent
Elevation: 3,500 to 4,500 feet
Average annual precipitation: 25 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 150 to 175 days
Frost-free season (32 degrees F): 90 to 130 days

Soil Properties

Typical profile:
0 to 10 inches—yellowish brown very gravelly loam (surface layer)
10 to 34 inches—light yellowish brown very gravelly clay loam and brown and yellowish brown extremely gravelly clay loam (subsoil)
34 to 48 inches—grayish brown extremely gravelly clay loam (substratum)
48 to 52 inches—unweathered serpentine
Depth class: Deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Culving)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

268—Serpen very gravelly loam, 30 to 60 percent slopes

Composition

Serpen and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Residuum and colluvium derived from serpentine with minor amounts of volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,500 to 4,500 feet
Average annual precipitation: 25 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 150 to 175 days
Frost-free season (32 degrees F): 90 to 130 days

Soil Properties

Typical profile:
- 0 to 10 inches—yellowish brown very gravelly loam (surface layer)
- 10 to 34 inches—light yellowish brown very gravelly clay loam and brown and yellowish brown extremely gravelly clay loam (subsoil)
- 34 to 48 inches—grayish brown extremely gravelly clay loam (substratum)
- 48 to 52 inches—unweathered serpentine

Depth class: Deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Culving)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

269—Shadypass very cindery sandy loam, 30 to 60 percent slopes

Composition

Shadypass and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Pumice and volcanic ash
Slope range: 30 to 60 percent
Elevation: 4,800 to 6,500 feet
Average annual precipitation: 35 to 45 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 37 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 85 to 105 days

Soil Properties

Typical profile:
- 0 to 3 inches—light brownish gray very cindery sandy loam (surface layer)
- 3 to 19 inches—light gray very cindery coarse sandy loam (subsoil)
- 19 to 60 inches—yellow cinders (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Rapid in the upper 19 inches and very rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Soils that have more rock fragments in the subsoil (Fears)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

270—Shamel sandy loam, 30 to 60 percent slopes

Composition

Shamel and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Loess and volcanic ash mixed with colluvium derived from gneiss and schist
Slope range: 30 to 60 percent
Elevation: 1,500 to 3,800 feet
Average annual precipitation: 16 to 20 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 170 days
Frost-free season (32 degrees F): 100 to 130 days

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 11 inches—grayish brown sandy loam (upper part of surface layer)
  11 to 17 inches—brown loam (lower part of surface layer)
  17 to 38 inches—pale brown loam (subsoil)
  38 to 60 inches—light yellowish brown gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that support grassland vegetation and do not support trees (Dinkels)
- Soils that have bedrock at a depth of 10 to 20 inches (Swakane)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Slump

271—Shamel sandy loam, 60 to 90 percent slopes

Composition

Shamel and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Loess and volcanic ash mixed with colluvium derived from gneiss and schist
Slope range: 60 to 90 percent
Elevation: 1,800 to 3,800 feet
Average annual precipitation: 16 to 20 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 170 days
Frost-free season (32 degrees F): 100 to 130 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 11 inches—grayish brown sandy loam (upper part of surface layer)
11 to 17 inches—brown loam (lower part of surface layer)
17 to 38 inches—pale brown loam (subsoil)
38 to 60 inches—light yellowish brown gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that support grassland vegetation and do not support trees (Dinkels)
- Soils that have bedrock at a depth of 10 to 20 inches (Swakane)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Slump

272—Shamel-Rock outcrop complex, 40 to 90 percent slopes

Composition

Shamel and similar soils—60 percent

Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Loess and volcanic ash mixed with colluvium derived from gneiss and schist
Slope range: 40 to 90 percent
Elevation: 1,400 to 3,800 feet
Average annual precipitation: 16 to 20 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 170 days
Frost-free season (32 degrees F): 100 to 130 days

Soil Properties

Typical profile of Shamel:
  Organic mat on surface—1 inch thick
  0 to 11 inches—grayish brown sandy loam (upper part of surface layer)
  11 to 17 inches—brown loam (lower part of surface layer)
  17 to 38 inches—pale brown loam (subsoil)
  38 to 60 inches—light yellowish brown gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Rock Outcrop

Kind of rock: Gneiss and schist

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Swakane)
- Soils that have more rock fragments in the subsoil (Ardenvoir)
- Rubble land

Operability Considerations

Shamel
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Slump

273—Shaser-Blewett complex, 30 to 60 percent slopes

Composition

Shaser and similar soils—40 percent
Blewett and similar soils—40 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Shaser—mountainsides that have an easterly, westerly, or southerly aspect; Blewett—mountainsides that have a southerly aspect
Parent material: Shaser—volcanic ash over residuum and colluvium derived from sandstone; Blewett—residuum and colluvium derived from sandstone mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 3,600 to 4,500 feet
Average annual precipitation: 22 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 145 to 170 days
Frost-free season (32 degrees F): Shaser—85 to 125 days; Blewett—90 to 130 days

Soil Properties

Typical profile of Shaser:
Organic mat on surface—1 inch thick
0 to 9 inches—light yellowish brown fine sandy loam (surface layer when mixed)
9 to 18 inches—pale brown gravelly loam (upper part of subsoil)
18 to 30 inches—brown very gravelly clay loam (middle part of subsoil)
30 to 46 inches—yellowish brown extremely gravelly clay loam (lower part of subsoil)
46 to 60 inches—yellowish brown and brown very gravelly clay loam (substratum)
Typical profile of Blewett:
Organic mat on surface—0.5 inch thick
0 to 3 inches—brown very gravelly sandy loam (surface layer)
3 to 10 inches—yellowish brown extremely gravelly sandy loam (subsoil)
10 to 14 inches—unweathered sandstone
Depth class: Shaser—very deep; Blewett—shallow
Drainage class: Well drained
Permeability: Shaser—moderate in the upper 18 inches and moderately slow below this depth; Blewett—moderate
Available water capacity: Shaser—moderately high; Blewett—very low

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil (Nard)
- Rock outcrop

Operability Considerations

Shaser
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Blewett
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery

Road rock: Readily available
Cut and fill slope stability: Slump

274—Shaser-Brisky complex, 30 to 60 percent slopes

Composition

Shaser and similar soils—40 percent
Brisky and similar soils—40 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Shaser—mountainsides that have an easterly, westerly, or southerly aspect; Brisky—mountainsides that have a southerly aspect
Parent material: Shaser—volcanic ash over residuum and colluvium derived from sandstone; Brisky—colluvium derived from sandstone mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 22 to 30 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Shaser—43 to 46 degrees F (frigid); Brisky—45 to 47 degrees F (mesic)
Growing season (28 degrees F): Shaser—145 to 175 days; Brisky—140 to 180 days
Frost-free season (32 degrees F): Shaser—85 to 130 days; Brisky—110 to 130 days

Soil Properties

Typical profile of Shaser:
  Organic mat on surface—1 inch thick
  0 to 9 inches—light yellowish brown fine sandy loam (surface layer when mixed)
  9 to 18 inches—pale brown gravelly loam (upper part of subsoil)
  18 to 30 inches—brown very gravelly clay loam (middle part of subsoil)
  30 to 46 inches—yellowish brown extremely gravelly clay loam (lower part of subsoil)
  46 to 60 inches—yellowish brown and brown very gravelly clay loam (substratum)
Typical profile of Brisky:
  0 to 4 inches—brown very gravelly sandy loam (surface layer)
  4 to 10 inches—light yellowish brown very gravelly sandy loam (subsoil)
  10 to 14 inches—unweathered sandstone
Depth class: Shaser—very deep; Brisky—shallow
Drainage class: Well drained
Permeability: Shaser—moderate in the upper 18 inches and moderately slow below this depth; Brisky—moderate
Available water capacity: Shaser—moderately high; Brisky—very low

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil (Nard)
- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Rock outcrop

Operability Considerations

Shaser
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight

Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Brisky
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

275—Shaser-Chapot complex, 30 to 60 percent slopes

Composition

Shaser and similar soils—60 percent
Chapot and similar soils—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Shaser—mountainsides that have an easterly or westerly aspect; Chapot—mountainsides
Parent material: Shaser—volcanic ash over residuum and colluvium derived from sandstone; Chapot—residuum and colluvium derived from basalt with a minor amount of volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,600 to 4,900 feet
Average annual precipitation: 30 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): Shaser—145 to 170 days; Chapot—135 to 180 days
Frost-free season (32 degrees F): 85 to 125 days

Soil Properties

Typical profile of Shaser:
  Organic mat on surface—1 inch thick
  0 to 9 inches—light yellowish brown fine sandy loam (surface layer when mixed)
  9 to 18 inches—pale brown gravelly loam (upper part of subsoil)
  18 to 30 inches—brown very gravelly clay loam (middle part of subsoil)
  30 to 46 inches—yellowish brown extremely gravelly clay loam (lower part of subsoil)
  46 to 60 inches—yellowish brown and brown very gravelly clay loam (substratum)
Typical profile of Chapot:
  Organic mat on surface—0.5 inch thick
  0 to 6 inches—light brownish gray gravelly sandy loam (surface layer)
  6 to 14 inches—light yellowish brown very gravelly loam (upper part of subsoil)
  14 to 24 inches—light yellowish brown very gravelly loam (middle part of subsoil)
  24 to 60 inches—brownish yellow extremely gravelly clay loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained

Permeability: Shaser—moderate in the upper 18 inches and moderately slow below this depth; Chapot—moderately slow
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Blewett and Brisky)
- Soils that have less rock fragments in the subsoil (Nard)
- Rock outcrop

Operability Considerations

Shaser
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Chapot
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

276—Skipeak gravelly sandy loam, 5 to 30 percent slopes

Composition

Skipeak and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Terraces in the mountains
Parent material: Volcanic ash over glacial outwash
Slope range: 5 to 30 percent
Elevation: 1,800 to 2,500 feet
Average annual precipitation: 70 to 100 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 7 inches—brown gravelly sandy loam (surface layer when mixed)
7 to 17 inches—strong brown very gravelly sandy loam (subsoil)
17 to 60 inches—light yellowish brown and pale yellow very gravelly loamy sand (substratum)
Depth class: Very deep
Drainage class: Somewhat excessively drained

Permeability: Rapid
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have 15 to 35 percent pumice to a depth of 15 inches (Line)
- Soils that are subject to flooding (Cryomont)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

277—Skipeak-Line association, 5 to 30 percent slopes*

Composition

Skipeak and similar soils—40 percent
Line and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Terraces of mountains
Parent material: Skipeak—volcanic ash over glacial outwash; Line—volcanic ash and pumice over glacial outwash
Slope range: 5 to 30 percent
Elevation: 1,800 to 2,500 feet
Average annual precipitation: Skipeak—70 to 100 inches; Line—65 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Skipeak—40 to 42 degrees F (cryic); Line—39 to 42 degrees F (cryic)
Growing season (28 degrees F): Skipeak—100 to 130 days; Line—120 to 150 days
Frost-free season (32 degrees F): Skipeak—60 to 90 days; Line—70 to 100 days

Soil Properties

Typical profile of Skipeak:
Organic mat on surface—2 inches thick
0 to 7 inches—brown gravelly sandy loam (surface layer when mixed)
7 to 17 inches—strong brown very gravelly sandy loam (subsoil)
17 to 60 inches—light yellowish brown and pale yellow very gravelly loamy sand (substratum)
Typical profile of Line:
Organic mat on surface—4 inches thick
0 to 4 inches—light yellowish brown cindery fine sandy loam (upper part of subsoil when mixed)
4 to 15 inches—light yellowish brown cindery sandy loam (middle part of subsoil)
15 to 31 inches—pale yellow very gravelly loamy sand (lower part of subsoil)
31 to 60 inches—light brownish gray extremely gravelly coarse sand (substratum)
Depth class: Very deep
Drainage class: Skipeak—somewhat excessively drained; Line—well drained

Permeability: Skipeak—moderately rapid; Line—moderate in the upper 15 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that are subject to flooding (Cryomont)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)

Operability Considerations

Skipeak
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

Line
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

278—Soda stony sandy loam, 8 to 30 percent slopes

Composition

Soda and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides and toeslopes that generally have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 8 to 30 percent
Elevation: 4,000 to 5,500 feet
Average annual precipitation: 65 to 80 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 95 to 140 days
Frost-free season (32 degrees F): 55 to 100 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 11 inches—brown stony sandy loam (upper part of subsoil)
11 to 25 inches—light brown cobbly sandy loam (lower part of subsoil when mixed)
25 to 46 inches—light yellowish brown very cobbly sandy loam (upper part of substratum)

46 to 60 inches—pale brown very cobbly loamy sand (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have a warmer temperature regime (Saska)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

279—Soda bouldery sandy loam, 30 to 60 percent slopes

Composition

Soda and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 4,000 to 5,800 feet
Average annual precipitation: 65 to 80 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 95 to 140 days
Frost-free season (32 degrees F): 55 to 100 days
Rock fragments on surface: Boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—3 inches thick
0 to 3 inches—light gray bouldery sandy loam (surface layer)
3 to 10 inches—brown gravelly fine sandy (upper part of subsoil)
10 to 18 inches—pale brown gravelly fine sandy loam (lower part of subsoil)
18 to 28 inches—pale brown very gravelly fine sandy loam (upper part of substratum)
28 to 60 inches—light brownish gray extremely stony fine sandy loam (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slippery

280—Soda very bouldery sandy loam, 30 to 60 percent slopes

Composition

Soda and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 4,000 to 5,500 feet
Average annual precipitation: 65 to 80 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 95 to 140 days
Frost-free season (32 degrees F): 55 to 100 days
Rock fragments on surface: Boulders cover 3 to 15 percent

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 8 inches—brown very bouldery sandy loam (surface layer)
8 to 15 inches—strong brown gravelly fine sandy loam (upper part of subsoil)
15 to 22 inches—light yellowish brown gravelly sandy loam (lower part of subsoil)
22 to 60 inches—light brownish gray very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Slight

Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

281—Soda bouldery fine sandy loam, 3 to 30 percent slopes

Composition

Soda and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,100 to 4,000 feet
Average annual precipitation: 75 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 115 to 150 days
Frost-free season (32 degrees F): 75 to 105 days
Rock fragments on surface: Boulders cover 1 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 10 inches—yellowish brown bouldery fine sandy loam (surface layer when mixed)
  10 to 18 inches—pale brown fine sandy loam (subsoil)
  18 to 50 inches—light brownish gray very stony sandy loam (substratum)
  50 to 60 inches—dense glacial till
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 50 inches and very slow below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that are extremely gravelly coarse sand between depths of 31 and 60 inches (Line)
- Soils that are extremely cobbly sand between depths of 21 and 60 inches and have a warmer temperature regime (Kladnick)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery

Road rock: Readily available
Cut and fill slope stability: Stable

282—Soda bouldery fine sandy loam, 30 to 60 percent slopes

Composition

Soda and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Volcanic ash and pumice over dense glacial till
Slope range: 30 to 60 percent
Elevation: 2,100 to 4,000 feet
Average annual precipitation: 70 to 110 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 42 degrees F (cryic)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Boulders cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 10 inches—yellowish brown bouldery fine sandy loam (surface layer when mixed)
10 to 18 inches—pale brown fine sandy loam (subsoil)
18 to 50 inches—light brownish gray very stony sandy loam (substratum)
50 to 60 inches—dense glacial till
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 50 inches and very slow below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that are extremely gravelly coarse sand between depths of 31 and 60 inches (Line)
- Soils that are extremely cobbly sand between depths of 21 and 60 inches and have a warmer temperature regime (Kladnick)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

283—Soda-Rock outcrop complex, 45 to 90 percent slopes

Composition

Soda and similar soils—65 percent
Rock outcrop—20 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Volcanic ash and pumice over dense glacial till
Slope range: 45 to 90 percent
Elevation: 2,500 to 3,900 feet
Average annual precipitation: 75 to 85 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 41 to 43 degrees F (cryic)
Growing season (28 degrees F): 115 to 150 days
Frost-free season (32 degrees F): 75 to 110 days
Rock fragments on surface: Boulders cover 1 to 3 percent

Soil Properties

Typical profile of Soda:
  Organic mat on surface—1 inch thick
  0 to 10 inches—light yellowish brown bouldery fine sandy loam (surface layer when mixed)
  10 to 28 inches—pale brown stony fine sandy loam (subsoil)
  28 to 50 inches—light brownish gray very stony fine sandy loam (substratum)
  50 to 60 inches—dense glacial till
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 50 inches and very slow below this depth
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Gneiss

Contrasting Inclusions

- Soils that are extremely gravelly coarse sand between depths of 31 and 60 inches (Line)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)

Operability Considerations

Soda
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

284—Soda, cold-Rock outcrop complex, 30 to 60 percent slopes

Composition

Soda and similar soils—60 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides on all aspects
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 4,000 to 5,600 feet
Average annual precipitation: 70 to 80 inches
Snowpack: More than 3 feet in November through April
Average air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 95 to 140 days
Frost-free season (32 degrees F): 55 to 100 days
Rock fragments on surface: Boulders cover 3 to 15 percent

Soil Properties

Typical profile of Soda:
Organic mat on surface—2 inches thick
0 to 8 inches—brown very bouldery sandy loam (surface layer)
8 to 15 inches—strong brown gravelly fine sandy loam (upper part of subsoil)
15 to 22 inches—light yellowish brown gravelly sandy loam (lower part of subsoil)
22 to 60 inches—light brownish gray very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Rock Outcrop

Kind of rock: Granodiorite, schist, and gneiss

Contrasting Inclusions

- Soils that are extremely gravelly coarse sand between depths of 31 and 60 inches (Line)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)

Operability Considerations

Soda
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

285—Soda association, 8 to 30 percent slopes*

Composition

Soda and similar soils—40 percent
Soda, cold, and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Soda—mountainsides and toeslopes that generally have a northerly aspect; Soda, cold—mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 8 to 30 percent
Elevation: 4,000 to 5,500 feet
Average annual precipitation: 65 to 80 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 95 to 140 days
Frost-free season (32 degrees F): 55 to 100 days
Rock fragments on surface: Soda—stones cover 1 to 3 percent; Soda, cold—boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile of Soda:
  Organic mat on surface—1 inch thick
  0 to 11 inches—brown stony sandy loam (upper part of subsoil)
  11 to 25 inches—light brown cobbly sandy loam (lower part of subsoil when mixed)
  25 to 46 inches—light yellowish brown very cobbly sandy loam (upper part of substratum)
  46 to 60 inches—pale brown very cobbly loamy sand (lower part of substratum)
Typical profile of Soda, cold:
  Organic mat on surface—2 inches thick
  0 to 8 inches—brown very bouldery sandy loam (surface layer)
  8 to 15 inches—strong brown gravelly fine sandy loam (upper part of subsoil)
  15 to 22 inches—light yellowish brown gravelly sandy loam (lower part of subsoil)
  22 to 60 inches—light brownish gray very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have a warmer temperature regime (Saska)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery

Road rock: Readily available
Cut and fill slope stability: Stable

286—Soda association, 30 to 60 percent slopes*

Composition

Soda and similar soils—40 percent
Soda, cold, and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 4,000 to 5,800 feet
Average annual precipitation: 65 to 80 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 95 to 140 days
Frost-free season (32 degrees F): 55 to 100 days
Rock fragments on surface: Soda—stones cover 1 to 3 percent; Soda, cold—boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile of Soda:
Organic mat on surface—1 inch thick
0 to 11 inches—brown stony sandy loam (upper part of subsoil)
11 to 25 inches—light brown cobbly sandy loam (lower part of subsoil when mixed)
25 to 46 inches—light yellowish brown very cobbly sandy loam (upper part of substratum)
46 to 60 inches—pale brown very cobbly loamy sand (lower part of substratum)
Typical profile of Soda, cold:
Organic mat on surface—2 inches thick
0 to 8 inches—brown very bouldery sandy loam (surface layer)
8 to 15 inches—strong brown gravelly fine sandy loam (upper part of subsoil)
15 to 22 inches—light yellowish brown gravelly sandy loam (lower part of subsoil)
22 to 60 inches—light brownish gray very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that are extremely gravelly coarse sand between depths of 31 and 60 inches (Line)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate

Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

287—Soda-Rock outcrop association, 30 to 60 percent slopes*

Composition

Soda and similar soils—35 percent
Soda, cold, and similar soils—30 percent
Rock outcrop—15 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Soda—mountainsides; Soda, cold—mountainsides that generally have a northerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 4,000 to 5,600 feet
Average annual precipitation: Soda—70 to 80 inches; Soda, cold—65 to 80 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 95 to 140 days
Frost-free season (32 degrees F): 55 to 100 days
Rock fragments on surface: Soda—boulders cover 3 to 15 percent; Soda, cold—stones cover 1 to 3 percent

Soil Properties

Typical profile of Soda:
Organic mat on surface—1 inch thick
0 to 11 inches—brown stony sandy loam (upper part of subsoil)
11 to 25 inches—light brown cobbly sandy loam (lower part of subsoil when mixed)
25 to 46 inches—light yellowish brown very cobbly sandy loam (upper part of substratum)
46 to 60 inches—pale brown very cobbly loamy sand (lower part of substratum)
Typical profile of Soda, cold:
Organic mat on surface—2 inches thick
0 to 8 inches—brown very bouldery sandy loam (surface layer)
8 to 15 inches—strong brown gravelly fine sandy loam (upper part of subsoil)
15 to 22 inches—light yellowish brown gravelly sandy loam (lower part of subsoil)
22 to 60 inches—light brownish gray very cobbly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that are extremely gravelly coarse sand between depths of 31 and 60 inches (Line)

- Soils that have bedrock at a depth of 20 to 40 inches (Serene)

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

288—Sodacreek bouldery fine sandy loam, 25 to 45 percent slopes

Composition

Sodacreek and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides and valleys
Parent material: Colluvium and landslide material derived from schist mixed with volcanic ash
Slope range: 25 to 45 percent
Elevation: 2,100 to 4,900 feet
Average annual precipitation: 75 to 85 inches
Snowpack: More than 3 feet in December through March
Average air temperature: 41 to 43 degrees F (cryic)
Growing season (28 degrees F): 120 to 155 days
Frost-free season (32 degrees F): 85 to 115 days
Rock fragments on surface: Boulders cover 1 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 9 inches—pale brown bouldery fine sandy loam (surface layer when mixed)
9 to 20 inches—pale brown gravelly fine sandy loam (subsoil)
20 to 60 inches—very pale brown very gravelly fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Moderately high
Seasonal high water table: Present in January through December (4 to 6 feet)

Contrasting Inclusions

- Soils that are extremely gravelly coarse sand between depths of 31 and 60 inches (Line)
- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight

Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Not available
Cut and fill slope stability: Slippery

289—Sodacreek-Rock outcrop complex, 45 to 90 percent slopes

Composition

Sodacreek and similar soils—70 percent
Rock outcrop—15 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Colluvium derived from schist mixed with volcanic ash
Slope range: 45 to 90 percent
Elevation: 2,600 to 4,600 feet
Average annual precipitation: 75 to 85 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 41 to 43 degrees F (cryic)
Growing season (28 degrees F): 120 to 155 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Boulders cover 1 to 3 percent

Soil Properties

Typical profile of Sodacreek:
  Organic mat on surface—1 inch thick
  0 to 9 inches—pale brown bouldery fine sandy loam (surface layer when mixed)
  9 to 20 inches—pale brown gravelly fine sandy loam (subsoil)
  20 to 60 inches—very pale brown very gravelly fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Moderately high
Seasonal high water table: Present in January through December (4 to 6 feet)

Rock Outcrop

Kind of rock: Schist

Contrasting Inclusions

- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery

Road rock: Not available
Cut and fill slope stability: Slump

290—Spodic Vitrixerands-Saska complex, 3 to 30 percent slopes*

Composition

Spodic Vitrixerands and similar soils—60 percent
Saska and similar soils—30 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Terraces
Parent material: Spodic Vitrixerands—volcanic ash over glacial lake sediment; Saska—volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,400 to 3,600 feet
Average annual precipitation: 50 to 55 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Saska—stones cover 1 to 3 percent

Soil Properties

Reference profile of Spodic Vitrixerands:
Organic mat on surface—1 inch thick
0 to 7 inches—light yellowish brown sandy loam (surface layer when mixed)
7 to 17 inches—pale brown loamy sand (subsoil)
17 to 60 inches—light gray, stratified very fine sandy loam and silt loam (substratum)
Typical profile of Saska:
Organic mat on surface—2 inches thick
0 to 6 inches—brown stony sandy loam (surface layer when mixed)
6 to 16 inches—light yellowish brown sandy loam (subsoil)
16 to 60 inches—light brownish gray and light gray very stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Spodic Vitrixerands—somewhat poorly drained and moderately well drained; Saska—well drained
Permeability: Moderate
Available water capacity: Spodic Vitrixerands—very high; Saska—moderate
Seasonal high water table: Spodic Vitrixerands—present in January through July with the highest level (0.3 to 0.6 foot) in April and May

Contrasting Inclusions

- Soils that have a colder temperature regime (Chiwaukum)
- Soils that have less rock fragments in the subsoil and are well drained (Tillicum)
- Rock outcrop

Operability Considerations

Spodic Vitrixerands
Compaction hazard (moist): Moderate

Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

Saska
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

291—Spodic Vitrixerands-Saska complex, 30 to 60 percent slopes*

Composition

Spodic Vitrixerands and similar soils—50 percent
Saska and similar soils—35 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terrace escarpments and mountainsides
Parent material: Spodic Vitrixerands—volcanic ash over glacial lake sediment; Saska—volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,400 to 3,600 feet
Average annual precipitation: 50 to 55 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days
Rock fragments on surface: Saska—stones cover 1 to 3 percent

Soil Properties

Reference profile of Spodic Vitrixerands:
Organic mat on surface—1 inch thick
0 to 7 inches—light yellowish brown sandy loam (surface layer when mixed)
7 to 17 inches—pale brown loamy sand (subsoil)
17 to 60 inches—light gray, stratified very fine sandy loam and silt loam (substratum)
Typical profile of Saska:
Organic mat on surface—2 inches thick
0 to 6 inches—brown stony sandy loam (surface layer when mixed)
6 to 16 inches—light yellowish brown sandy loam (subsoil)
16 to 60 inches—light brownish gray and light gray very stony sandy loam (substratum)
Depth class: Very deep
Drainage class: Spodic Vitrixerands—somewhat poorly drained and moderately well drained; Saska—well drained

Permeability: Moderate
Available water capacity: Spodic Vitrixerands—very high; Saska—moderate
Seasonal high water table: Spodic Vitrixerands—present in January through July with the highest level (0.3 to 0.6 foot) in April through May

Contrasting Inclusions

- Soils that have a colder temperature regime (Chiwaukum)
- Soils that have less rock fragments in the subsoil and are well drained (Tillicum)
- Rock outcrop

Operability Considerations

Spodic Vitrixerands
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Saska
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

292—Stemilt stony loam, 3 to 30 percent slopes

Composition

Stemilt and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Residuum derived from basalt mixed with loess and volcanic ash in the upper part
Slope range: 3 to 30 percent
Elevation: 3,000 to 4,500 feet
Average annual precipitation: 20 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 145 to 170 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 2 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 10 inches—grayish brown stony loam (upper part of surface layer)
10 to 18 inches—brown cobbly loam (lower part of surface layer)
18 to 60 inches—yellowish brown very cobbly clay loam (subsoil)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Anatone)
- Soils that have a colder temperature regime (Naxing)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

293—Stemilt stony loam, 30 to 60 percent slopes

Composition

Stemilt and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Colluvium and residuum derived from basalt mixed with loess and volcanic ash in the upper part
Slope range: 30 to 60 percent
Elevation: 3,000 to 4,900 feet
Average annual precipitation: 20 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 145 to 170 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 2 to 3 percent

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 10 inches—grayish brown stony loam (upper part of surface layer)
  10 to 18 inches—brown cobbly loam (lower part of surface layer)
  18 to 60 inches—yellowish brown very cobbly clay loam (subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Anatone)
- Soils that have a colder temperature regime (Naxing)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

294—Surgh fine sandy loam, 3 to 30 percent slopes

Composition

Surgh and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Residuum, colluvium, and alluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 3 to 30 percent
Elevation: 4,700 to 5,500 feet
Average annual precipitation: 25 to 40 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 37 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 100 days

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 3 inches—pale brown fine sandy loam (surface layer when mixed)
  3 to 13 inches—pale brown gravelly fine sandy loam (upper part of subsoil)
  13 to 21 inches—light yellowish brown very gravelly sandy loam (lower part of subsoil)
  21 to 46 inches—light yellowish brown extremely gravelly sandy loam (substratum)
  46 to 50 inches—fractured unweathered gneiss
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that are volcanic ash with 0 to 10 percent rock fragments to a depth of 23 inches (Almac)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Soils that have bedrock at a depth of 10 to 20 inches and have a warmer temperature regime (Chumstick)
- Soils that have a warmer temperature regime (Tillicum)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight

Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

295—Surgh fine sandy loam, 30 to 60 percent slopes

Composition

Surgh and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 4,700 to 5,500 feet
Average annual precipitation: 25 to 40 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 37 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 100 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 3 inches—pale brown fine sandy loam (surface layer when mixed)
3 to 13 inches—pale brown gravelly fine sandy loam (upper part of subsoil)
13 to 21 inches—light yellowish brown very gravelly sandy loam (lower part of subsoil)
21 to 46 inches—light yellowish brown extremely gravelly sandy loam (substratum)
46 inches—fractured unweathered gneiss
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that are volcanic ash with 0 to 10 percent rock fragments to a depth of 23 inches (Almac)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Soils that have a warmer temperature regime (Tillicum)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery

Road rock: Readily available
Cut and fill slope stability: Slump

296—Surgh fine sandy loam, 60 to 90 percent slopes

Composition

Surgh and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 60 to 90 percent
Elevation: 4,700 to 5,500 feet
Average annual precipitation: 25 to 40 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 37 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 100 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 3 inches—pale brown fine sandy loam (surface layer when mixed)
3 to 13 inches—pale brown gravelly fine sandy loam (upper part of subsoil)
13 to 21 inches—light yellowish brown very gravelly sandy loam (lower part of subsoil)
21 to 46 inches—light yellowish brown extremely gravelly sandy loam (substratum)
46 inches—fractured unweathered gneiss
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate

Contrasting Inclusions

- Soils that are volcanic ash with 0 to 10 percent rock fragments to a depth of 23 inches (Almac)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Soils that have a warmer temperature regime (Tillicum)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

297—Surgh-Wedge complex, 8 to 30 percent slopes

Composition

Surgh and similar soils—40 percent
Wedge and similar soils—40 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Surgh—alluvial fans; Wedge—toeslopes of mountains
Parent material: Surgh—alluvium and colluvium derived from granite with a mantle of volcanic ash; Wedge—volcanic ash and pumice
Slope range: 8 to 30 percent
Elevation: 2,700 to 3,700 feet
Average annual precipitation: Surgh—30 to 40 inches; Wedge—35 to 40 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Surgh—37 to 40 degrees F (cryic); Wedge—38 to 40 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 100 days
Rock fragments on surface: Surgh—boulders cover 3 to 10 percent

Soil Properties

Typical profile of Surgh:
Organic mat on surface—2 inches thick
0 to 12 inches—pale brown very bouldery fine sandy loam (surface layer)
12 to 41 inches—very pale brown very cobbly sandy loam (subsoil)
41 to 60 inches—light gray extremely gravelly coarse sandy loam (substratum)
Typical profile of Wedge:
Organic mat on surface—1 inch thick
0 to 5 inches—brownish yellow and pale brown cindery sandy loam (surface layer when mixed)
5 to 11 inches—brownish yellow and pale brown cindery sandy loam (upper part of subsoil)
11 to 31 inches—light yellowish brown and very pale brown very cindery sandy loam and extremely cindery loamy sand (lower part of subsoil)
31 to 60 inches—yellow and white cinders (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Surgh—moderate; Wedge—moderately rapid in the upper 31 inches and very rapid below this depth
Available water capacity: Surgh—moderate; Wedge—moderately high
Frequency of flooding: Surgh—rare in March through May

Contrasting Inclusions

- Soils that are extremely gravelly coarse sand between depths of 12 and 60 inches (Cryomont)
- Soils that have a warmer temperature regime (Choralmont)

Operability Considerations

Surgh
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

Wedge
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

298—Swakane stony sandy loam, 30 to 60 percent slopes

Composition

Swakane and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 155 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
  0 to 2 inches—dark brown stony sandy loam (upper part of surface layer)
  2 to 15 inches—yellowish brown very gravelly coarse sandy loam (lower part of surface layer)
  15 to 19 inches—fractured unweathered gneiss
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Contrasting Inclusions

- Soils that have less rock fragments in the profile and have bedrock at a depth of 40 to 60 inches (Ardenmont)
- Soils that have a colder temperature regime (Chumstick)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope

Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

299—Swakane stony sandy loam, 60 to 90 percent slopes

Composition

Swakane and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash and loess
Slope range: 60 to 90 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 155 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 2 inches—dark brown stony sandy loam (upper part of surface layer)
2 to 15 inches—yellowish brown very gravelly coarse sandy loam (lower part of surface layer)
15 to 19 inches—fractured unweathered gneiss
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Contrasting Inclusions

- Soils that have less rock fragments in the profile and have bedrock at a depth of 40 to 60 inches (Ardenmont)
- Soils that have a colder temperature regime (Chumstick)
- Rock outcrop
- Rubble land

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

300—Swakane, granitic substratum-Rock outcrop complex, 40 to 90 percent slopes

Composition

Swakane, granitic substratum, and similar soils—50 percent

Rock outcrop—25 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Colluvium and residuum derived from granodiorite mixed with volcanic ash and loess
Slope range: 40 to 90 percent
Elevation: 1,200 to 3,600 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 155 days
Rock fragments on surface: Stones cover 2 to 3 percent

Soil Properties

Typical profile of Swakane:
0 to 5 inches—grayish brown stony sandy loam (upper part of surface layer)
5 to 10 inches—brown very gravelly sandy loam (lower part of surface layer)
10 to 16 inches—brown very gravelly sandy loam (substratum)
16 to 20 inches—unweathered granodiorite
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Rock Outcrop

Kind of rock: Granodiorite

Contrasting Inclusions

- Soils that have bedrock at a depth of 40 to 60 inches and receive less rainfall (Dinkels)
- Soils that have bedrock at a depth of 20 to 40 inches and receive less rainfall (Bjork)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

301—Swakane-Rock outcrop complex, 45 to 90 percent slopes

Composition

Swakane and similar soils—50 percent
Rock outcrop—35 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect

Parent material: Colluvium and residuum derived from gneiss and schist mixed with volcanic ash and loess
Slope range: 45 to 90 percent
Elevation: 2,200 to 3,600 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 155 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of Swakane:
0 to 2 inches—dark brown stony sandy loam (upper part of surface layer)
2 to 15 inches—yellowish brown very gravelly coarse sandy loam (lower part of surface layer)
15 to 19 inches—fractured unweathered gneiss
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Very low

Rock Outcrop

Kind of rock: Gneiss and schist

Contrasting Inclusions

- Soils that have a colder temperature regime (Chumstick)
- Soils that are very deep (Shamel)
- Rubble land

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

302—Switchback gravelly fine sandy loam, 3 to 30 percent slopes

Composition

Switchback and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium and residuum derived from granodiorite mixed with minor amounts of loess and volcanic ash
Slope range: 3 to 30 percent
Elevation: 1,800 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
  0 to 10 inches—grayish brown gravelly fine sandy loam (surface layer)
  10 to 20 inches—grayish brown gravelly fine sandy loam (subsoil)
  20 to 26 inches—pale brown gravelly sandy loam (substratum)
  26 to 36 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Burnscreek)
- Soils that have bedrock at a depth of 40 to 60 inches (Dinkelman)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Stable

303—Switchback gravelly fine sandy loam, 30 to 60 percent slopes

Composition

Switchback and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium and residuum derived from granodiorite mixed with minor amounts of loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 1,800 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
  0 to 10 inches—grayish brown gravelly fine sandy loam (surface layer)
  10 to 20 inches—grayish brown gravelly fine sandy loam (subsoil)
  20 to 26 inches—pale brown gravelly sandy loam (substratum)
  26 to 34 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained

Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have bedrock at a depth of 40 to 60 inches (Dinkelman)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that are volcanic ash to a depth of 35 inches (Domkey)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

304—Switchback gravelly fine sandy loam, 60 to 90 percent slopes

Composition

Switchback and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Colluvium derived from granodiorite mixed with minor amounts of loess and volcanic ash
Slope range: 60 to 90 percent
Elevation: 1,800 to 3,000 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 130 to 160 days
Frost-free season (32 degrees F): 90 to 120 days

Soil Properties

Typical profile:
0 to 10 inches—grayish brown gravelly fine sandy loam (surface layer)
10 to 20 inches—grayish brown gravelly fine sandy loam (subsoil)
20 to 26 inches—pale brown gravelly sandy loam (substratum)
26 to 36 inches—weathered granodiorite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have bedrock at a depth of 40 to 60 inches (Dinkelman)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

- Soils that are volcanic ash to a depth of 35 inches (Domkey)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

305—Taneum loam, 30 to 60 percent slopes

Composition

Taneum and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Residuum and colluvium derived from schist and gneiss mixed with loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,000 to 4,200 feet
Average annual precipitation: 15 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Growing season (28 degrees F): 160 to 195 days
Frost-free season (32 degrees F): 100 to 145 days

Soil Properties

Typical profile:
0 to 16 inches—dark grayish brown and grayish brown loam (surface layer)
16 to 21 inches—brown gravelly clay loam (subsurface layer)
21 to 47 inches—yellowish brown gravelly clay loam (upper part of subsoil)
47 to 58 inches—yellowish brown extremely cobbly clay loam (lower part of subsoil)
58 to 62 inches—fractured unweathered schist
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 16 inches and slow below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more rainfall and have a colder temperature regime (Nahahum)
- Soils that have bedrock at a depth of 10 to 20 inches (Swakane)
- Soils that receive less rainfall (Yaxon)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope

Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

306—Thow cindery fine sandy loam, 8 to 30 percent slopes

Composition

Thow and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash, pumice, and loess over glacial till
Slope range: 8 to 30 percent
Elevation: 1,400 to 2,800 feet
Average annual precipitation: 18 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 95 to 120 days

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 8 inches—light brownish gray cindery fine sandy loam (surface layer)
  8 to 22 inches—pale brown cindery sandy loam (upper part of subsoil)
  22 to 42 inches—light gray cindery coarse sandy loam (lower part of subsoil)
  42 to 60 inches—light gray extremely cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 42 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a gravelly sandy loam subsoil (Dinkelman)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

307—Thow cindery fine sandy loam, 30 to 60 percent slopes

Composition

Thow and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash, pumice, and loess over glacial till
Slope range: 30 to 60 percent
Elevation: 1,400 to 2,800 feet
Average annual precipitation: 18 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 95 to 120 days

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 8 inches—light brownish gray cindery fine sandy loam (surface layer)
  8 to 22 inches—pale brown cindery sandy loam (upper part of subsoil)
  22 to 42 inches—light gray cindery coarse sandy loam (lower part of subsoil)
  42 to 60 inches—light gray extremely cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 42 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a gravelly sandy loam subsoil (Dinkelman)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

308—Thow cindery fine sandy loam, 60 to 90 percent slopes

Composition

Thow and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash, pumice, and loess over glacial till
Slope range: 60 to 90 percent
Elevation: 1,600 to 2,800 feet
Average annual precipitation: 18 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 43 to 45 degrees F (frigid)
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 95 to 120 days

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 8 inches—light brownish gray cindery fine sandy loam (surface layer)
  8 to 22 inches—pale brown cindery sandy loam (upper part of subsoil)
  22 to 42 inches—light gray cindery coarse sandy loam (lower part of subsoil)
  42 to 60 inches—light gray extremely cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 42 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have a gravelly sandy loam subsoil (Dinkelman)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

309—Thow-Domkey-Rock outcrop complex, 30 to 60 percent slopes

Composition

Thow and similar soils—30 percent
Domkey and similar soils—30 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Thow—volcanic ash and pumice over glacial till; Domkey—volcanic ash and pumice over weathered granodiorite

Slope range: 30 to 60 percent
Elevation: 1,200 to 3,400 feet
Average annual precipitation: 18 to 25 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Thow—43 to 45 degrees F (frigid); Domkey—42 to 44 degrees F (frigid)
Growing season (28 degrees F): Thow—135 to 175 days; Domkey—130 to 160 days
Frost-free season (32 degrees F): Thow—95 to 120 days; Domkey—90 to 120 days

Soil Properties

Typical profile of Thow:
Organic mat on surface—1 inch thick
0 to 8 inches—light brownish gray cindery fine sandy loam (surface layer)
8 to 22 inches—pale brown cindery sandy loam (upper part of subsoil)
22 to 42 inches—light gray cindery coarse sandy loam (lower part of subsoil)
42 to 60 inches—light gray extremely cobbly loamy sand (substratum)
Typical profile of Domkey:
Organic mat on surface—1 inch thick
0 to 3 inches—brown sandy loam (upper part of surface layer)
3 to 10 inches—pale brown sandy loam (lower part of surface layer)
10 to 18 inches—light brownish gray gravelly sandy loam (upper part of subsoil)
18 to 35 inches—pale brown gravelly coarse sandy loam (lower part of subsoil)
35 to 45 inches—light yellowish brown very gravelly loamy coarse sand (substratum)
45 to 50 inches—weathered granodiorite
Depth class: Thow—very deep; Domkey—deep
Drainage class: Well drained
Permeability: Thow—moderate in the upper 42 inches and very rapid below this depth; Domkey—moderate in the upper 35 inches and moderately rapid below this depth
Available water capacity: Moderate

Rock Outcrop

Kind of rock: Granitic

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)
- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman)
- Soils that have a very cindery or extremely cindery sandy loam subsoil (Palmich)

Operability Considerations

Thow
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

Domkey
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate

Displacement hazard (dry): Slight
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

310—Thowson fine sandy loam, 0 to 8 percent slopes

Composition

Thowson and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Toeslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 0 to 8 percent
Elevation: 1,100 to 2,800 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 50 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days

Soil Properties

Typical profile:
  0 to 14 inches—pale brown fine sandy loam (surface layer when mixed)
  14 to 34 inches—light yellowish brown cindery fine sandy loam (upper part of subsoil)
  34 to 45 inches—very pale brown very cindery fine sandy loam (lower part of subsoil)
  45 to 60 inches—light gray very cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 45 inches and very rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

311—Thowson fine sandy loam, 8 to 15 percent slopes

Composition

Thowson and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Toeslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 8 to 15 percent
Elevation: 1,100 to 2,800 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 50 degrees F (frigid)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days

Soil Properties

Typical profile:
0 to 14 inches—pale brown fine sandy loam (surface layer when mixed)
14 to 34 inches—light yellowish brown cindery fine sandy loam (upper part of subsoil)
34 to 45 inches—very pale brown very cindery fine sandy loam (lower part of subsoil)
45 to 60 inches—light gray very cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 45 inches and very rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

312—Thowson fine sandy loam, 15 to 30 percent slopes

Composition

Thowson and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Toeslopes and backslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 15 to 30 percent
Elevation: 1,100 to 2,800 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 50 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days

Soil Properties

Typical profile:
 0 to 14 inches—pale brown fine sandy loam (surface layer when mixed)
 14 to 34 inches—light yellowish brown cindery fine sandy loam (upper part of subsoil)
 34 to 45 inches—very pale brown very cindery fine sandy loam (lower part of subsoil)
 45 to 60 inches—light gray very cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 45 inches and very rapid below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

313—Thowson fine sandy loam, 30 to 60 percent slopes

Composition

Thowson and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 1,100 to 3,600 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 50 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days

Soil Properties

Typical profile:
  0 to 14 inches—pale brown fine sandy loam (surface layer when mixed)
  14 to 34 inches—light yellowish brown cindery fine sandy loam (upper part of subsoil)
  34 to 45 inches—very pale brown very cindery fine sandy loam (lower part of subsoil)
  45 to 60 inches—light gray very cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 45 inches and very rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

314—Thowson stony fine sandy loam, 30 to 60 percent slopes

Composition

Thowson and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 1,600 to 3,600 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 50 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
  0 to 7 inches—light brownish gray stony fine sandy loam (surface layer)
  7 to 42 inches—pale brown fine sandy loam and light yellowish brown cindery fine sandy loam (subsoil)
  42 to 60 inches—very pale brown very stony fine sandy loam (substratum)
Depth class: Very deep

Drainage class: Well drained
Permeability: Moderate in the upper 42 inches and very rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

315—Thowson-Rock outcrop complex, 8 to 30 percent slopes

Composition

Thowson and similar soils—60 percent
Rock outcrop—15 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 8 to 30 percent
Elevation: 1,600 to 3,200 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 50 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of Thowson:
0 to 7 inches—light brownish gray stony fine sandy loam (surface layer)
7 to 42 inches—pale brown fine sandy loam and light yellowish brown cindery fine sandy loam (subsoil)
42 to 60 inches—very pale brown very stony fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 42 inches and very rapid below this depth
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Granitic

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)

Operability Considerations

Thowson
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

316—Thowson-Rock outcrop complex, 30 to 60 percent slopes

Composition

Thowson and similar soils—60 percent
Rock outcrop—15 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 1,600 to 3,600 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 50 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days
Rock fragments on surface: Thowson—stones cover 1 to 3 percent

Soil Properties

Typical profile of Thowson:
0 to 7 inches—light brownish gray stony fine sandy loam (surface layer)
7 to 42 inches—pale brown fine sandy loam and light yellowish brown cindery fine sandy loam (subsoil)
42 to 60 inches—very pale brown very stony fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 42 inches and very rapid below this depth
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Granitic

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)

Operability Considerations

Thowson
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

317—Thowson-Rock outcrop complex, 60 to 90 percent slopes

Composition

Thowson and similar soils—50 percent
Rock outcrop—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 60 to 90 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 50 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days
Rock fragments on surface: Thowson—stones cover 1 to 3 percent

Soil Properties

Typical profile of Thowson:
0 to 7 inches—light brownish gray stony fine sandy loam (surface layer)
7 to 42 inches—pale brown fine sandy loam and light yellowish brown cindery fine sandy loam (subsoil)
42 to 60 inches—very pale brown very stony fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 42 inches and very rapid below this depth
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Granitic

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)

Operability Considerations

Thowson
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

318—Thowson-Rock outcrop association, 30 to 60 percent slopes*

Composition

Thowson, stony, and similar soils—30 percent
Thowson and similar soils—30 percent
Rock outcrop—15 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 1,600 to 3,600 feet
Average annual precipitation: 15 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 47 to 50 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 170 days
Rock fragments on surface: Thowson—stones cover 1 to 3 percent

Soil Properties

Typical profile of Thowson, stony:
  0 to 7 inches—light brownish gray stony fine sandy loam (surface layer)
  7 to 42 inches—pale brown fine sandy loam and light yellowish brown cindery fine sandy loam (subsoil)
  42 to 60 inches—very pale brown very stony fine sandy loam (substratum)
Typical profile of Thowson:
  0 to 14 inches—pale brown fine sandy loam (surface layer when mixed)
  14 to 34 inches—light yellowish brown cindery fine sandy loam (upper part of subsoil)
  34 to 45 inches—very pale brown very cindery fine sandy loam (lower part of subsoil)
  45 to 60 inches—light gray very cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Thowson, stony—moderate in the upper 42 inches and very rapid below this depth; Thowson—moderate in the upper 45 inches and very rapid below this depth
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Granitic

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Soils that have bedrock at a depth of 20 to 40 inches (Safety)

Operability Considerations

Thowson, stony
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

Thowson
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

319—Tillicum sandy loam, 30 to 60 percent slopes

Composition

Tillicum and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash over residuum and colluvium derived from schist or gneiss
Slope range: 30 to 60 percent
Elevation: 3,200 to 4,000 feet
Average annual precipitation: 35 to 55 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 70 to 110 days

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 5 inches—grayish brown sandy loam (surface layer)
  5 to 22 inches—brown sandy loam (subsoil)
  22 to 40 inches—brown gravelly sandy loam and pale brown cobbly sandy loam (substratum)
  40 to 44 inches—unweathered schist
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 22 inches and moderately rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman)
- Soils that have more rock fragments (Inkler and Saska)

- Soils that have a colder temperature regime (Surgh)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

320—Tillicum fine sandy loam, 8 to 30 percent slopes

Composition

Tillicum and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash over residuum and colluvium derived from gneiss or schist
Slope range: 8 to 30 percent
Elevation: 3,200 to 4,800 feet
Average annual precipitation: 35 to 55 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 8 inches—light brownish gray fine sandy loam (surface layer)
8 to 24 inches—light brownish gray and pale brown fine sandy loam (subsoil)
24 to 42 inches—pale brown cobbly sandy loam (substratum)
42 to 46 inches—unweathered schist
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 24 inches and moderately rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have a colder temperature regime (Surgh)
- Soils that have bedrock at a depth of 20 to 40 inches and have a colder temperature regime (Bagmont)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate

Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Stable

321—Tillicum fine sandy loam, 30 to 60 percent slopes

Composition

Tillicum and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash over residuum and colluvium derived from gneiss or schist
Slope range: 30 to 60 percent
Elevation: 3,200 to 4,800 feet
Average annual precipitation: 35 to 55 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 41 to 43 degrees F (frigid)
Growing season (28 degrees F): 120 to 150 days
Frost-free season (32 degrees F): 80 to 110 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 8 inches—light brownish gray fine sandy loam (surface layer)
8 to 24 inches—light brownish gray and pale brown fine sandy loam (subsoil)
24 to 42 inches—pale brown cobbly sandy loam (substratum)
42 to 46 inches—unweathered schist
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 24 inches and moderately rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Kloochman)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Soils that have a colder temperature regime (Surgh)
- Soils that have bedrock at a depth of 20 to 40 inches and have a colder temperature regime (Bagmont)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

322—Tillmont cindery sandy loam, 8 to 30 percent slopes

Composition

Tillmont and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Volcanic ash and pumice over colluvium and residuum derived from schist or gneiss
Slope range: 8 to 30 percent
Elevation: 2,500 to 3,200 feet
Average annual precipitation: 30 to 65 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 125 to 165 days
Frost-free season (32 degrees F): 75 to 110 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 6 inches—grayish brown cindery sandy loam (surface layer)
6 to 20 inches—light yellowish brown cindery sandy loam (subsoil)
20 to 34 inches—yellow and white cinders (upper part of substratum)
34 to 38 inches—pale brown cindery loamy coarse sand (middle part of substratum)
38 to 46 inches—dark yellowish brown extremely cobbly very fine sandy loam (lower part of substratum)
46 to 50 inches—fractured unweathered schist
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 20 inches and rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Stable

323—Tillmont cindery sandy loam, 30 to 60 percent slopes

Composition

Tillmont and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Volcanic ash and pumice over colluvium and residuum derived from schist or gneiss
Slope range: 30 to 60 percent
Elevation: 2,500 to 4,600 feet
Average annual precipitation: 30 to 65 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F (frigid)
Growing season (28 degrees F): 125 to 165 days
Frost-free season (32 degrees F): 75 to 110 days

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 6 inches—grayish brown cindery sandy loam (surface layer)
6 to 20 inches—light yellowish brown cindery sandy loam (subsoil)
20 to 34 inches—yellow and white cinders (upper part of substratum)
34 to 38 inches—pale brown cindery loamy coarse sand (middle part of substratum)
38 to 46 inches—dark yellowish brown extremely cobbly very fine sandy loam (lower part of substratum)
46 to 50 inches—fractured unweathered schist
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate in the upper 20 inches and rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer)
- Soils that have bedrock at a depth of 10 to 20 inches (Chumstick)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

324—Tillmont-Inkler association, 30 to 60 percent slopes*

Composition

Tillmont and similar soils—40 percent
Inkler and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Tillmont—mountainsides that have a southerly aspect; Inkler—mountainsides
Parent material: Tillmont—volcanic ash and pumice over colluvium and residuum

derived from schist and gneiss; Inkler—colluvium derived from gneiss and schist with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,500 to 4,600 feet
Average annual precipitation: Tillmont—30 to 65 inches; Inkler—30 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: Tillmont—42 to 44 degrees F (frigid); Inkler—41 to 44 degrees F (frigid)
Growing season (28 degrees F): Tillmont—125 to 165 days; Inkler—140 to 170 days
Frost-free season (32 degrees F): Tillmont—75 to 110 days; Inkler—90 to 110 days
Rock fragments on surface: Inkler—stones cover 1 to 3 percent

Soil Properties

Typical profile of Tillmont:
Organic mat on surface—0.5 inch thick
0 to 6 inches—grayish brown cindery sandy loam (surface layer)
6 to 20 inches—light yellowish brown cindery sandy loam (subsoil)
20 to 34 inches—yellow and white cinders (upper part of substratum)
34 to 38 inches—pale brown cindery loamy coarse sand (middle part of substratum)
38 to 46 inches—dark yellowish brown extremely cobbly very fine sandy loam (lower part of substratum)
46 to 50 inches—fractured unweathered schist
Typical profile of Inkler:
0 to 4 inches—grayish brown stony fine sandy loam (surface layer)
4 to 10 inches—pale brown very cobbly sandy loam (upper part of subsoil)
10 to 29 inches—light yellowish brown very stony sandy loam (lower part of subsoil)
29 to 44 inches—pale brown extremely cobbly sandy loam (substratum)
44 to 48 inches—fractured unweathered gneiss
Depth class: Deep
Drainage class: Well drained
Permeability: Tillmont—moderate in the upper 20 inches and rapid below this depth rapid; Inkler—moderate in the upper 10 inches and rapid below this depth
Available water capacity: Tillmont—moderate; Inkler—low

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Mountaineer and Chumstick)
- Soils that do not have volcanic ash (Ardenvoir)
- Rock outcrop

Operability Considerations

Tillmont
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Hazard of soil damage by fire: Severe
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

Inkler
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight

Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

325—Tiptop very gravelly loam, 30 to 60 percent slopes

Composition

Tiptop and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash mixed with colluvium derived from sandstone
Slope range: 30 to 60 percent
Elevation: 4,600 to 5,700 feet
Average annual precipitation: 25 to 45 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
  Organic mat on surface—0.5 inch thick
  0 to 2 inches—dark grayish brown very gravelly loam (surface layer)
  2 to 28 inches—yellowish brown and brown extremely gravelly loam (subsoil)
  28 to 60 inches—yellowish brown extremely gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches and have a warmer temperature regime (Blewett)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

326—Tiptop-Naxing association, 30 to 60 percent slopes*

Composition

Tiptop and similar soils—40 percent

Naxing and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Tiptop—volcanic ash mixed with colluvium derived from sandstone; Naxing—colluvium derived from basalt mixed with volcanic ash and loess
Slope range: 30 to 60 percent
Elevation: 4,600 to 5,700 feet
Average annual precipitation: Tiptop—25 to 45 inches; Naxing—22 to 30 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Tiptop—39 to 41 degrees F (cryic); Naxing—40 to 42 degrees F (cryic)
Growing season (28 degrees F): Tiptop—100 to 140 days; Naxing—100 to 170 days
Frost-free season (32 degrees F): Tiptop—60 to 90 days; Naxing—70 to 110 days
Rock fragments on surface: Naxing—stones cover 3 to 5 percent

Soil Properties

Typical profile of Tiptop:
  Organic mat on surface—0.5 inch thick
  0 to 2 inches—dark grayish brown very gravelly loam (surface layer)
  2 to 28 inches—yellowish brown and brown extremely gravelly loam (subsoil)
  28 to 60 inches—yellowish brown extremely gravelly sandy loam (substratum)
Typical profile of Naxing:
  Organic mat on surface—1 inch thick
  0 to 10 inches—grayish brown very stony loam (surface layer)
  10 to 29 inches—yellowish brown very cobbly loam and very cobbly sandy loam (subsoil)
  29 to 60 inches—yellowish brown extremely cobbly loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Tiptop—moderately high; Naxing—moderate

Contrasting Inclusions

- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have bedrock at a depth of 20 to 40 inches (Saydab)
- Rock outcrop
- Rubble land

Operability Considerations

Tiptop
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

Naxing
Compaction hazard (moist): Slight
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe

Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

327—Totem sandy loam, 5 to 30 percent slopes

Composition

Totem and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides, glaciated valleys, and toeslopes
Parent material: Volcanic ash and pumice
Slope range: 5 to 30 percent
Elevation: 2,600 to 5,500 feet
Average annual precipitation: 50 to 75 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 43 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
  Organic mat on surface—2 inches thick
  0 to 6 inches—brown sandy loam (surface layer when mixed)
  6 to 25 inches—light yellowish brown sandy loam (subsoil)
  25 to 33 inches—light yellowish brown very cindery sandy loam (upper part of substratum)
  33 to 60 inches—very pale brown and white cinders (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 25 inches and rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Nimue and Fears)
- Soils that are gravelly loam between depths of 29 and 50 inches (Almac)
- Soils that are poorly drained or somewhat poorly drained (Typic Cryaquands)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Stable

328—Totem sandy loam, 30 to 60 percent slopes

Composition

Totem and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 3,000 to 5,500 feet
Average annual precipitation: 50 to 75 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 43 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
  Organic mat on surface—2 inches thick
  0 to 6 inches—brown sandy loam (surface layer when mixed)
  6 to 25 inches—light yellowish brown sandy loam (subsoil)
  25 to 33 inches—light yellowish brown very cindery sandy loam (upper part of substratum)
  33 to 60 inches—very pale brown and white cinders (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 25 inches and rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Nimue and Fears)
- Soils that are gravelly loam between depths of 29 and 50 inches (Almac)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Slump

329—Totem sandy loam, 60 to 90 percent slopes

Composition

Totem and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice
Slope range: 60 to 90 percent
Elevation: 3,000 to 5,500 feet
Average annual precipitation: 50 to 75 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 43 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days

Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—2 inches thick
0 to 6 inches—brown sandy loam (surface layer when mixed)
6 to 25 inches—light yellowish brown sandy loam (subsoil)
25 to 33 inches—light yellowish brown very cindery sandy loam (upper part of substratum)
33 to 60 inches—very pale brown and white cinders (lower part of substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 25 inches and rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Nimue and Fears)
- Soils that are gravelly loam between depths of 29 and 50 inches (Almac)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Slump

330—Totem-Chiwaukum association, 30 to 60 percent slopes*

Composition

Totem and similar soils—60 percent
Chiwaukum and similar soils—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Totem—mountainsides; Chiwaukum—mountainsides that generally have a northerly aspect
Parent material: Totem—volcanic ash and pumice; Chiwaukum—volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 3,000 to 5,500 feet
Average annual precipitation: Totem—50 to 75 inches; Chiwaukum—55 to 70 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Totem—40 to 43 degrees F (cryic); Chiwaukum—40 to 42 degrees F (cryic)
Growing season (28 degrees F): Totem—100 to 130 days; Chiwaukum—100 to 145 days
Frost-free season (32 degrees F): Totem—60 to 90 days; Chiwaukum—60 to 105 days

Rock fragments on surface: Chiwaukum—boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile of Totem:
Organic mat on surface—2 inches thick
0 to 6 inches—brown sandy loam (surface layer when mixed)
6 to 25 inches—light yellowish brown sandy loam (subsoil)
25 to 33 inches—light yellowish brown very cindery sandy loam (upper part of substratum)
33 to 60 inches—very pale brown and white cinders (lower part of substratum)
Typical profile of Chiwaukum:
Organic mat on surface—1 inch thick
0 to 5 inches—brown bouldery fine sandy loam (surface layer when mixed)
5 to 17 inches—brown gravelly sandy loam (upper part of subsoil)
17 to 26 inches—yellowish brown cobbly sandy loam (lower part of subsoil)
26 to 60 inches—light brownish gray extremely stony coarse sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Totem—moderate in the upper 25 inches and rapid below this depth; Chiwaukum—moderate
Available water capacity: Totem—moderately high; Chiwaukum—moderate

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have bedrock at a depth of 10 to 20 inches (Treen)
- Soils that have bedrock at a depth of 20 to 40 inches (Serene)
- Rock outcrop
- Rubble land

Operability Considerations

Totem
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Slump

Chiwaukum
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

331—Treen fine sandy loam, 45 to 90 percent slopes

Composition

Treen and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Residuum and colluvium derived from igneous and metamorphic rock mixed with volcanic ash
Slope range: 45 to 90 percent
Elevation: 3,300 to 5,600 feet
Average annual precipitation: 70 to 100 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 41 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile of Treen:
Organic mat on surface—1 inch thick
0 to 11 inches—dark grayish brown and dark brown fine sandy loam (surface layer)
11 to 16 inches—dark brown gravelly fine sandy loam (subsoil)
16 inches—fractured unweathered schist
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate in the upper 11 inches and moderately rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that are very deep (Chiwaukum)
- Soils that consist of angular rock fragments (Reggad)
- Avalanche chutes
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

332—Treen-Klapatche association, 45 to 90 percent slopes*

Composition

Treen and similar soils—50 percent
Klapatche and similar soils—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Treen—mountainsides; Klapatche—mountainsides and ridge crests
Parent material: Treen—residuum and colluvium derived from igneous and

metamorphic rock mixed with volcanic ash; Klapatche—volcanic ash and pumice over colluvium and residuum derived from granitic rock

Slope range: 45 to 90 percent
Elevation: 3,300 to 5,600 feet
Average annual precipitation: Treen—70 to 100 inches; Klapatche—70 to 90 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Treen—38 to 41 degrees F (cryic); Klapatche—41 to 43 degrees F (cryic)
Growing season (28 degrees F): Treen—100 to 130 days; Klapatche—110 to 130 days
Frost-free season (32 degrees F): Treen—60 to 90 days; Klapatche—70 to 90 days
Rock fragments on surface: Klapatche—stones and boulders cover 3 to 15 percent

Soil Properties

Typical profile of Treen:
Organic mat on surface—1 inch thick
0 to 11 inches—dark grayish brown and dark brown fine sandy loam (surface layer)
11 to 16 inches—dark brown gravelly fine sandy loam (subsoil)
16 to 20 inches—fractured unweathered schist
Typical profile of Klapatche:
Organic mat on surface—2 inches thick
0 to 4 inches—gray very stony loamy sand (surface layer when mixed)
4 to 12 inches—yellowish brown gravelly sandy loam (subsoil)
12 to 26 inches—grayish brown very cobbly loamy sand (buried subsoil)
26 to 37 inches—reddish gray extremely gravelly sand (substratum)
37 to 47 inches—weathered granodiorite
Depth class: Treen—shallow; Klapatche—moderately deep
Drainage class: Well drained
Permeability: Treen—moderate in the upper 11 inches and moderately rapid below this depth; Klapatche—moderately rapid in the upper 12 inches and very rapid below this depth
Available water capacity: Treen—low; Klapatche—very low

Contrasting Inclusions

- Soils that are very deep (Chiwaukum)
- Soils that consist of angular rock fragments (Reggad)
- Avalanche chutes
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

Operability Considerations

Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Slight

Hazard of soil damage by fire: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

333—Tronsen stony silt loam, 8 to 30 percent slopes

Composition

Tronsen and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Benches and mountainsides that have a southerly aspect
Parent material: Residuum and colluvium derived from basalt and andesite mixed with loess and volcanic ash
Slope range: 8 to 30 percent
Elevation: 3,500 to 4,000 feet
Average annual precipitation: 14 to 16 inches
Average annual air temperature: 46 to 48 degrees F (mesic)
Frost-free season (32 degrees F): 140 to 165 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
  0 to 9 inches—dark grayish brown stony silt loam (surface layer)
  9 to 30 inches—brown and yellowish brown very gravelly clay loam (upper part of subsoil)
  30 to 60 inches—pale brown extremely gravelly clay (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more rainfall and a colder temperature regime (Loneridge)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—rock fragments in the surface layer
Pipelines: Severe—rock fragments in the surface layer
Livestock ponds: Severe—slope
Seeding: Moderate—surface stones, droughty surface layer, and slope
Brush control: Moderate—surface stones and slope

334—Tronsen stony silt loam, 30 to 60 percent slopes

Composition

Tronsen and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Residuum and colluvium derived from basalt and andesite mixed with loess and volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,500 to 4,000 feet
Average annual precipitation: 14 to 16 inches
Average annual air temperature: 46 to 48 degrees F (mesic)
Frost-free season (32 degrees F): 140 to 165 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
 0 to 9 inches—dark grayish brown stony silt loam (surface layer)
 9 to 30 inches—brown and yellowish brown very gravelly clay loam (upper part of subsoil)
 30 to 60 inches—pale brown extremely gravelly clay (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more rainfall and a colder temperature regime (Loneridge)
- Soils that have bedrock at a depth of 10 to 20 inches (Tyee)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—rock fragments in the surface layer and slope
Pipelines: Severe—rock fragments in the surface layer and slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

335—Tyee gravelly loamy coarse sand, 30 to 90 percent slopes

Composition

Tyee and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Colluvium and residuum derived from granodiorite with minor amounts of loess and volcanic ash
Slope range: 30 to 90 percent
Elevation: 1,200 to 3,500 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)

Frost-free season (32 degrees F): 130 to 155 days

Soil Properties

Typical profile:
0 to 5 inches—brown gravelly loamy coarse sand (upper part of surface layer)
5 to 12 inches—pale brown gravelly coarse sandy loam (lower part of surface layer)
12 to 22 inches—weathered granodiorite
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid in the upper 5 inches and moderate below this depth
Available water capacity: Very low

Contrasting Inclusions

- Soils that are volcanic ash to a depth of 30 inches (Bisping)
- Soils that receive less rainfall and have bedrock at a depth of 40 to 60 inches (Dinkels)
- Soils that are volcanic ash to a depth of 45 inches (Thowson)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

336—Tyee gravelly sandy loam, 3 to 30 percent slopes

Composition

Tyee and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Ridgetops and benches
Parent material: Residuum and colluvium derived from granodiorite with minor amounts of loess and volcanic ash
Slope range: 3 to 30 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 155 days

Soil Properties

Typical profile:
0 to 11 inches—grayish brown and brown gravelly sandy loam (surface layer)
11 to 19 inches—very pale brown gravelly coarse sandy loam (substratum)
19 to 29 inches—weathered granodiorite
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid in the upper 11 inches and moderate below this depth
Available water capacity: Very low

Contrasting Inclusions

- Soils that are volcanic ash to a depth of 30 inches (Bisping)
- Soils that have bedrock at a depth of 20 to 40 inches and have more clay in the subsoil (Morical)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock
Pipelines: Severe—depth to bedrock
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock
Brush control: Moderate—slope

337—Tyee gravelly sandy loam, 30 to 90 percent slopes

Composition

Tyee and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect
Parent material: Colluvium derived from granodiorite with minor amounts of loess and volcanic ash
Slope range: 30 to 90 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 14 to 18 inches
Average annual air temperature: 47 to 49 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 155 days

Soil Properties

Typical profile:
0 to 11 inches—grayish brown and brown gravelly sandy loam (surface layer)
11 to 19 inches—very pale brown gravelly coarse sandy loam (substratum)
19 to 29 inches—weathered granodiorite
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid in the upper 11 inches and moderate below this depth
Available water capacity: Very low

Contrasting Inclusions

- Soils that receive less rainfall and have bedrock at a depth of 40 to 60 inches (Dinkels)
- Soils that are volcanic ash to a depth of 45 inches (Thowson)
- Soils that are volcanic ash to a depth of 30 inches (Bisping)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope

Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

338—Tyee-Bisping complex, 30 to 60 percent slopes

Composition

Tyee and similar soils—45 percent
Bisping and similar soils—30 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Tyee—mountainsides that have a southerly aspect; Bisping—mountainsides
Parent material: Tyee—colluvium derived from granodiorite with minor amounts of loess and volcanic ash; Bisping—volcanic ash and pumice over residuum and colluvium derived from granodiorite and rhyolite
Slope range: 30 to 60 percent
Elevation: 2,500 to 3,500 feet
Average annual precipitation: Tyee—16 to 18 inches; Bisping—18 to 22 inches
Average annual air temperature: Tyee—46 to 48 degrees F (mesic); Bisping—45 to 47 degrees F (mesic)
Frost-free season (32 degrees F): 130 to 160 days

Soil Properties

Typical profile of Tyee:
0 to 11 inches—grayish brown and brown gravelly sandy loam (surface layer)
11 to 19 inches—very pale brown gravelly coarse sandy loam (substratum)
19 to 29 inches—weathered granodiorite
Typical profile of Bisping:
Organic mat on surface—1 inch thick
0 to 4 inches—grayish brown fine sandy loam (upper part of surface layer)
4 to 10 inches—brown cindery fine sandy loam (lower part of surface layer)
10 to 19 inches—pale brown cindery fine sandy loam (subsoil)
19 to 30 inches—pale brown cindery fine sandy loam (upper part of substratum)
30 to 60 inches—light yellowish brown and brownish yellow loam (lower part of substratum)
Depth class: Tyee—shallow; Bisping—very deep
Drainage class: Well drained
Permeability: Tyee—moderately rapid in the upper 11 inches and moderate below this depth; Bisping—moderate
Available water capacity: Tyee—very low; Bisping—high

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Morical)

Development Limitations

Tyee
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

Operability Considerations

Bisping
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

339—Typic Cryaquands, nearly level to gently sloping*

Composition

Typic Cryaquands and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Wet depressional meadows commonly adjacent to ponds and lakes on broad mountain ridges, saddles, valleys, and cirque basins
Parent material: Volcanic ash and pumice, volcanic ash and pumice mixed with alluvium, and volcanic ash and pumice over glacial till
Slope range: 0 to 5 percent
Elevation: 4,800 to 6,500 feet
Average annual precipitation: 40 to 60 inches
Average annual air temperature: 37 to 39 degrees F (cryic)
Growing season (28 degrees F): 60 to 90 days

Soil Properties

Reference profile:
0 to 9 inches—dark grayish brown and brown silt loam (surface layer)
9 to 15 inches—mottled, very pale brown very fine sandy loam (upper part of subsoil)
15 to 24 inches—mottled, light gray fine sandy loam (middle part of subsoil)
24 to 60 inches—mottled, light gray fine sandy loam (lower part of subsoil)
Depth class: Very deep
Drainage class: Poorly drained and somewhat poorly drained
Permeability: Moderate in the upper 15 inches and moderate to rapid below this depth
Available water capacity: High
Seasonal high water table: Present in March through August with the highest level (0.8 to 1.2 feet) in May through June

Contrasting Inclusions

- Soils that are very stony or very cobbly sand throughout (Cryomont)
- Small areas of water
- Soils that are well drained (Wedge)

Development Limitations

Corrosivity: Uncoated steel—high; concrete—high
Fences: Severe—snow damage
Pipelines: Severe—seasonal high water table
Livestock ponds: Severe—seepage
Seeding: Severe—seasonal high water table
Brush control: Severe—wetness

340—Vabbing bouldery sandy loam, 3 to 30 percent slopes

Composition

Vabbing and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have an easterly or westerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 3 to 30 percent
Elevation: 2,600 to 3,000 feet
Average annual precipitation: 70 to 100 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 41 to 43 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 70 to 100 days
Rock fragments on surface: Boulders cover 2 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—4 inches thick
0 to 3 inches—light brownish gray bouldery sandy loam (surface layer)
3 to 10 inches—light brown cindery sandy loam (upper part of subsoil)
10 to 26 inches—white and reddish yellow cinders and light gray very cindery coarse sand (lower part of subsoil)
26 to 60 inches—very pale brown very gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 10 inches and moderate to rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have a very channery sandy loam subsoil (Gilpar)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

341—Vabbing bouldery sandy loam, 30 to 60 percent slopes

Composition

Vabbing and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have an easterly or westerly aspect
Parent material: Volcanic ash and pumice over glacial till
Slope range: 30 to 60 percent
Elevation: 2,600 to 4,400 feet
Average annual precipitation: 70 to 100 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 40 to 43 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 70 to 100 days
Rock fragments on surface: Boulders cover 2 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—4 inches thick
0 to 3 inches—light brownish gray bouldery sandy loam (surface layer)
3 to 10 inches—light brown cindery sandy loam (upper part of subsoil)
10 to 26 inches—white and reddish yellow cinders and light gray very cindery coarse sand (lower part of subsoil)
26 to 60 inches—very pale brown very gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 10 inches and moderate to rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have a very channery sandy loam subsoil (Gilpar)
- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

342—Vabbing-Gilpar association, 30 to 60 percent slopes*

Composition

Vabbing and similar soils—45 percent
Gilpar and similar soils—35 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Vabbing—mountainsides that have an easterly or westerly aspect; Gilpar—mountainsides that generally have a northerly aspect
Parent material: Vabbing—volcanic ash and pumice over glacial till; Gilpar—colluvium and residuum derived from metamorphic and igneous rock mixed with volcanic ash

Slope range: 30 to 60 percent
Elevation: 2,600 to 4,400 feet
Average annual precipitation: Vabbing—70 to 100 inches; Gilpar—70 to 90 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Vabbing—40 to 43 degrees F (cryic); Gilpar—42 to 44 degrees F (cryic)
Growing season (28 degrees F): Vabbing—100 to 140 days; Gilpar—130 to 170 days
Frost-free season (32 degrees F): Vabbing—70 to 100 days; Gilpar—90 to 110 days
Rock fragments on surface: Vabbing—boulders cover 2 to 3 percent; Gilpar—stones cover 5 to 10 percent

Soil Properties

Typical profile of Vabbing:
  Organic mat on surface—1 inch thick
  0 to 3 inches—light brownish gray cindery bouldery sandy loam (surface layer)
  3 to 10 inches—light brown cindery sandy loam (upper part of subsoil)
  10 to 26 inches—white and reddish yellow cinders and light gray very cindery coarse sand (lower part of subsoil)
  26 to 60 inches—very pale brown very gravelly sandy loam (substratum)
Typical profile of Gilpar:
  Organic mat on surface—1 inch thick
  0 to 6 inches—pink very stony sandy loam (surface layer when mixed)
  6 to 28 inches—light brown and light yellowish brown very channery sandy loam (subsoil)
  28 to 60 inches—light yellowish brown very channery sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 10 inches and moderate to rapid below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Rock outcrop

Operability Considerations

Vabbing
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

Gilpar
Compaction hazard (moist): Slight
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

343—Vabbing-Rock outcrop complex, 45 to 90 percent slopes

Composition

Vabbing and similar soils—70 percent
Rock outcrop—20 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a northerly aspect
Parent material: Volcanic ash and pumice over colluvium derived from glacial till
Slope range: 45 to 90 percent
Elevation: 2,600 to 3,800 feet
Average annual precipitation: 75 to 85 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 41 to 43 degrees F (cryic)
Growing season (28 degrees F): 100 to 140 days
Frost-free season (32 degrees F): 75 to 95 days
Rock fragments on surface: Boulders cover 2 to 3 percent

Soil Properties

Typical profile of Vabbing:
  Organic mat on surface—4 inches thick
  0 to 3 inches—light brownish gray cindery bouldery sandy loam (surface layer)
  3 to 10 inches—light brown cindery sandy loam (upper part of subsoil)
  10 to 26 inches—white and reddish yellow cinders and light gray very cindery coarse sand (lower part of subsoil)
  26 to 60 inches—very pale brown very gravelly sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 10 inches and moderate to rapid below this depth
Available water capacity: Moderately high

Rock Outcrop

Kind of rock: Granite, schist, and gneiss

Contrasting Inclusions

- Soils that have dense glacial till at a depth of 20 to 40 inches (Vabus)
- Soils that have a very channery sandy loam subsoil (Gilpar)
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

344—Vabus gravelly fine sandy loam, 3 to 30 percent slopes

Composition

Vabus and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Valleys and toeslopes of mountains
Parent material: Glacial till with an admixture of volcanic ash in the upper part
Slope range: 3 to 30 percent
Elevation: 2,500 to 3,900 feet
Average annual precipitation: 70 to 90 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 42 degrees F (cryic)
Growing season (28 degrees F): 110 to 140 days
Frost-free season (32 degrees F): 70 to 100 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 6 inches—brown gravelly fine sandy loam (surface layer when mixed)
6 to 36 inches—light yellowish brown and yellowish brown very gravelly sandy loam (subsoil)
36 to 60 inches—light olive brown dense glacial till (substratum)
Depth class: Moderately deep to dense glacial till
Drainage class: Moderately well drained
Permeability: Moderately rapid in the upper 36 inches and very slow below this depth
Available water capacity: Low
Seasonal high water table: Present in February through April (1.5 to 3.0 feet)

Contrasting Inclusions

- Soils that do not have dense glacial till in the profile (Gilpar and Nimue)
- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

345—Vabus gravelly fine sandy loam, 30 to 60 percent slopes

Composition

Vabus and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Glacial till with an admixture of volcanic ash in the upper part
Slope range: 30 to 60 percent
Elevation: 3,100 to 4,800 feet
Average annual precipitation: 70 to 90 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 42 degrees F (cryic)
Growing season (28 degrees F): 110 to 140 days
Frost-free season (32 degrees F): 70 to 100 days

Soil Properties

Typical profile:
  Organic mat on surface—1 inch thick
  0 to 6 inches—brown gravelly fine sandy loam (surface layer when mixed)
  6 to 36 inches—light yellowish brown and yellowish brown very gravelly sandy loam (subsoil)
  36 to 60 inches—light olive brown dense glacial till (substratum)
Depth class: Moderately deep to dense glacial till
Drainage class: Moderately well drained
Permeability: Moderately rapid in the upper 36 inches and very slow below this depth
Available water capacity: Low
Seasonal high water table: Present in February through April (1.5 to 3.0 feet)

Contrasting Inclusions

- Soils that do not have dense glacial till in the profile (Gilpar and Nimue)
- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

346—Vabus-Chinkmin association, 3 to 30 percent slopes*

Composition

Vabus and similar soils—40 percent
Chinkmin and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Valleys and toeslopes of mountains
Parent material: Vabus—glacial till with an admixture of volcanic ash in the upper part;

Chinkmin—volcanic ash mixed with colluvium over glacial till
Slope range: 3 to 30 percent
Elevation: 2,500 to 3,900 feet
Average annual precipitation: Vabus—70 to 90 inches; Chinkmin—80 to 100 inches
Snowpack: Vabus—more than 3 feet in December through March; Chinkmin—more than 3 feet in November through April
Average annual air temperature: Vabus—39 to 42 degrees F (cryic); Chinkmin—39 to 41 degrees F (cryic)
Growing season (28 degrees F): Vabus—110 to 140 days; Chinkmin—90 to 110 days
Frost-free season (32 degrees F): Vabus—70 to 100 days; Chinkmin—50 to 80 days
Rock fragments on surface: Chinkmin—boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile of Vabus:
Organic mat on surface—1 inch thick
0 to 6 inches—brown gravelly fine sandy loam (surface layer when mixed)
6 to 36 inches—light yellowish brown and yellowish brown very gravelly sandy loam (subsoil)
36 to 60 inches—light olive brown dense glacial till (substratum)
Typical profile of Chinkmin:
Organic mat on surface—5 inches thick
0 to 4 inches—dark reddish brown bouldery fine sandy loam (surface layer when mixed)
4 to 7 inches—strong brown and reddish brown gravelly fine sandy loam (upper part of subsoil)
7 to 18 inches—strong brown and brownish yellow gravelly sandy loam (middle part of subsoil)
18 to 36 inches—yellowish brown and pale yellow very gravelly loamy coarse sand (lower part of subsoil)
36 to 40 inches—light gray cemented glacial till
Depth class: Vabus—moderately deep to dense glacial till; Chinkmin—moderately deep to cemented glacial till
Drainage class: Moderately well drained
Permeability: Vabus—moderately rapid in the upper 36 inches and very slow below this depth; Chinkmin—moderate in the upper 36 inches and very slow below this depth
Available water capacity: Vabus—low; Chinkmin—moderate
Seasonal high water table: Vabus—present in February through April (1.5 to 3.0 feet); Chinkmin—present in November through July (1.5 to 3.0 feet)

Contrasting Inclusions

- Soils that do not have dense glacial till in the profile (Gilpar and Nimue)
- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Rock outcrop
- Rubble land

Operability Considerations

Vabus
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate

Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

Chinkmin
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Stable

347—Vabus-Chinkmin association, 30 to 60 percent slopes*

Composition

Vabus and similar soils—40 percent
Chinkmin and similar soils—35 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Backslopes of mountains
Parent material: Vabus—glacial till with an admixture of volcanic ash in the upper part; Chinkmin—volcanic ash mixed with colluvium over glacial till
Slope range: 30 to 60 percent
Elevation: 3,100 to 4,800 feet
Average annual precipitation: Vabus—70 to 90 inches; Chinkmin—80 to 100 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: Vabus—39 to 42 degrees F (cryic); Chinkmin—39 to 41 degrees F (cryic)
Growing season (28 degrees F): Vabus—110 to 140 days; Chinkmin—90 to 110 days
Frost-free season (32 degrees F): Vabus—70 to 100 days; Chinkmin—50 to 80 days
Rock fragments on surface: Chinkmin—boulders and stones cover 1 to 3 percent

Soil Properties

Typical profile of Vabus:
Organic mat on surface—1 inch thick
0 to 6 inches—brown gravelly fine sandy loam (surface layer when mixed)
6 to 36 inches—light yellowish brown and yellowish brown very gravelly sandy loam (subsoil)
36 to 60 inches—light olive brown dense glacial till (substratum)
Typical profile of Chinkmin:
Organic mat on surface—5 inches thick
0 to 4 inches—dark reddish brown bouldery fine sandy loam (surface layer when mixed)
4 to 7 inches—strong brown and reddish brown gravelly fine sandy loam (upper part of subsoil)

7 to 18 inches—strong brown and brownish yellow gravelly sandy loam (middle part of subsoil)
18 to 36 inches—yellowish brown and pale yellow very gravelly loamy coarse sand (lower part of subsoil)
36 to 40 inches—light gray cemented glacial till

Depth class: Vabus—moderately deep to dense glacial till; Chinkmin—moderately deep to cemented glacial till
Drainage class: Moderately well drained
Permeability: Vabus—moderately rapid in the upper 36 inches and very slow below this depth; Chinkmin—moderate in the upper 36 inches and very slow below this depth
Available water capacity: Vabus—low; Chinkmin—moderate
Seasonal high water table: Vabus—present in February through April (1.5 to 3.0 feet); Chinkmin—present in November through July (1.5 to 3.0 feet)

Contrasting Inclusions

- Soils that do not have dense glacial till in the profile (Gilpar and Nimue)
- Soils that are very cobbly loamy sand between depths of 26 and 48 inches (Altapeak)
- Soils that have a very cindery sandy loam subsoil (Vabbing)
- Avalanche chutes
- Rock outcrop
- Rubble land

Operability Considerations

Vabus
Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Slump

Chinkmin
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery
Road rock: Readily available
Cut and fill slope stability: Slump

348—Varelum loam, 3 to 8 percent slopes

Composition

Varelum and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces
Parent material: Slope alluvium mixed with loess and volcanic ash in the upper part
Slope range: 3 to 8 percent

Elevation: 1,300 to 1,700 feet
Average annual precipitation: 18 to 25 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 185 days

Soil Properties

Typical profile:
  0 to 18 inches—grayish brown loam (surface layer)
  18 to 42 inches—pale brown clay loam (subsoil)
  42 to 52 inches—weathered sandstone
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have less clay in the subsoil and are subject to flooding (Billyridge)
- Soils that have a colder temperature regime (Nard)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Stable

349—Varelum loam, 8 to 15 percent slopes

Composition

Varelum and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Terraces and footslopes of foothills
Parent material: Residuum and colluvium derived from sandstone mixed with loess and volcanic ash in the upper part
Slope range: 8 to 15 percent
Elevation: 1,500 to 3,000 feet
Average annual precipitation: 18 to 28 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F (mesic)
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 185 days

Soil Properties

Typical profile:
  0 to 18 inches—grayish brown loam (surface layer)
  18 to 42 inches—pale brown clay loam (subsoil)
  42 to 52 inches—weathered sandstone

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have less clay in the subsoil and are subject to flooding (Billyridge)
- Soils that have a colder temperature regime (Nard)
- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Stable

350—Varelum loam, 15 to 30 percent slopes

Composition

Varelum and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Footslopes and backslopes of foothills
Parent material: Residuum and colluvium derived from sandstone mixed with loess and volcanic ash in the upper part
Slope range: 15 to 30 percent
Elevation: 1,500 to 3,000 feet
Average annual precipitation: 18 to 28 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F
Growing season (28 degrees F): 190 to 210 days
Frost-free season (32 degrees F): 150 to 185 days

Soil Properties

Typical profile:
0 to 18 inches—grayish brown loam (surface layer)
18 to 42 inches—pale brown clay loam (subsoil)
42 to 52 inches—weathered sandstone
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have a colder temperature regime (Nard)
- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Soils that have bedrock at a depth of 10 to 20 inches (Brisky)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Stable

351—Varelum loam, 30 to 60 percent slopes

Composition

Varelum and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes of foothills
Parent material: Residuum and colluvium derived from sandstone mixed with loess and volcanic ash in the upper part
Slope range: 30 to 60 percent
Elevation: 1,500 to 3,000 feet
Average annual precipitation: 20 to 28 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 45 to 47 degrees F
Growing season (28 degrees F): 190 to 205 days
Frost-free season (32 degrees F): 150 to 175 days

Soil Properties

Typical profile:
  0 to 18 inches—grayish brown loam (surface layer)
  18 to 42 inches—pale brown clay loam (subsoil)
  42 to 52 inches—weathered sandstone
Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that have a colder temperature regime (Nard)
- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Soils that have bedrock at a depth of 10 to 20 inches (Brisky)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

352—Vitricryands, steep and very steep*

Composition

Vitricryands and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides and ridgetops
Parent material: Volcanic ash over residuum and colluvium derived from granodiorite and schist
Slope range: 30 to 75 percent
Elevation: 5,000 to 6,500 feet
Average annual precipitation: 35 to 55 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 37 to 39 degrees F (cryic)
Growing season (28 degrees F): 95 to 135 days
Frost-free season (32 degrees F): 45 to 85 days

Soil Properties

Reference profile:
0 to 12 inches—yellowish brown sandy loam (surface layer when mixed)
12 to 26 inches—light yellowish brown gravelly coarse sandy loam (subsoil)
26 to 36 inches—weathered granodiorite
Depth class: Moderately deep and deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Contrasting Inclusions

- Soils that have less rock fragments in the upper part of the subsoil and are very deep (Almac)
- Rock outcrop
- Rubble land

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

353—Vitricryands-Rock outcrop complex, steep and very steep*

Composition

Vitricryands and similar soils—45 percent
Rock outcrop—30 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Mountainsides and ridgetops
Parent material: Volcanic ash over residuum and colluvium derived from granodiorite and schist
Slope range: 30 to 110 percent
Elevation: 5,000 to 6,500 feet
Average annual precipitation: 35 to 55 inches
Snowpack: More than 3 feet in November through April
Average annual air temperature: 37 to 39 degrees F (cryic)
Growing season (28 degrees F): 95 to 135 days
Frost-free season (32 degrees F): 45 to 85 days

Soil Properties

Reference profile of Vitricryands:
0 to 12 inches—yellowish brown sandy loam (surface layer when mixed)
12 to 26 inches—light yellowish brown gravelly coarse sandy loam (subsoil)
26 to 36 inches—weathered granodiorite
Depth class: Moderately deep and deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Low

Rock Outcrop

Kind of rock: Granitic rock, gneiss, and schist

Contrasting Inclusions

- Soils that have less rock fragments in the upper part of the subsoil (Almac)
- Rubble land
- Avalanche chutes

Operability Considerations

Vitricryands
Compaction hazard (moist): Moderate
Puddling hazard (wet): Moderate
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Readily available
Cut and fill slope stability: Slump

354—Wagberg stony fine sandy loam, 5 to 30 percent slopes

Composition

Wagberg and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Toeslopes of hills and moraines
Parent material: Glacial till with minor amounts of volcanic ash and loess in the upper part

Slope range: 5 to 30 percent
Elevation: 1,200 to 3,500 feet
Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 52 degrees F
Frost-free season (32 degrees F): 120 to 150 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
 0 to 5 inches—dark grayish brown stony fine sandy loam (upper part of surface layer)
 5 to 13 inches—grayish brown cobbly sandy loam (lower part of surface layer)
 13 to 38 inches—light brownish gray very cobbly sandy loam and pale brown very gravelly sandy loam (upper part of subsoil)
 38 to 53 inches—light yellowish brown very cobbly coarse sandy loam (lower part of subsoil)
 53 to 60 inches—yellowish brown very cobbly loamy sand (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil (Brief)
- Soils that are volcanic ash and pumice and receive more rainfall (Thowson)
- Soils that have bedrock at a depth of 10 to 20 inches (Swakane)
- Soils that have an extremely bouldery surface (Wagberg)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—rock fragments in the surface layer
Pipelines: Severe—rock fragments in the surface layer
Livestock ponds: Severe—slope
Seeding: Severe—surface stones
Brush control: Severe—surface stones

355—Wagberg stony fine sandy loam, 30 to 60 percent slopes

Composition

Wagberg and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Toeslopes of hills and moraines
Parent material: Glacial till with minor amounts of volcanic ash and loess in the upper part
Slope range: 30 to 60 percent
Elevation: 1,200 to 3,500 feet
Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 52 degrees F
Frost-free season (32 degrees F): 120 to 150 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:

0 to 5 inches—dark grayish brown stony fine sandy loam (upper part of surface layer)
5 to 13 inches—grayish brown cobbly sandy loam (lower part of surface layer)
13 to 38 inches—light brownish gray very cobbly sandy loam and pale brown very gravelly sandy loan (upper part of subsoil)
38 to 53 inches—light yellowish brown very cobbly coarse sandy loam (lower part of subsoil)
53 to 60 inches—yellowish brown very cobbly loamy sand (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have less rock fragments in the subsoil (Brief)
- Soils that are volcanic ash and pumice and receive more rainfall (Thowson)
- Soils that have bedrock at a depth of 10 to 20 inches (Swakane)
- Soils that have an extremely bouldery surface (Wagberg)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—rock fragments in the surface layer
Pipelines: Severe—rock fragments in the surface layer
Livestock ponds: Severe—slope
Seeding: Severe—surface stones
Brush control: Severe—surface stones

356—Wagberg complex, 25 to 70 percent slopes

Composition

Wagberg and similar soils—40 percent
Wagberg, south, and similar soils—40 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Wagberg—hummocky end moraines that have a northerly aspect; Wagberg, south—hummocky end moraines that have a southerly aspect
Parent material: Glacial till with minor amounts of volcanic ash and loess in the upper part
Slope range: 25 to 70 percent
Elevation: 1,200 to 2,000 feet
Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 52 degrees F (mesic)
Frost-free season (32 degrees F): 120 to 150 days
Rock fragments on surface: Wagberg—stones cover 3 to 10 percent; Wagberg, south—stones cover 1 to 3 percent

Soil Properties

Typical profile of Wagberg:

0 to 4 inches—dark brown very stony fine sandy loam (upper part of surface layer)

4 to 15 inches—brown gravelly sandy loam (lower part of surface layer)
15 to 40 inches—pale brown very cobbly sandy loam (subsoil)
40 to 60 inches—light yellowish brown very cobbly coarse sandy loam (substratum)

Typical profile of Wagberg, south:

0 to 5 inches—dark grayish brown stony fine sandy loam (upper part of surface layer)
5 to 13 inches—grayish brown cobbly sandy loam (lower part of surface layer)
13 to 38 inches—light brownish gray very cobbly sandy loam and pale brown very gravelly sandy loam (upper part of subsoil)
38 to 53 inches—light yellowish brown very cobbly coarse sandy loam (lower part of subsoil)
53 to 60 inches—yellowish brown very cobbly loamy sand (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that consist of volcanic ash and pumice and receive more rainfall (Thowson)
- Soils that have an extremely bouldery surface (Wagberg)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—rock fragments in the surface layer and slope
Pipelines: Severe—rock fragments in the surface layer and slope
Livestock ponds: Severe—slope
Seeding: Severe—surface stones and slope
Brush control: Severe—surface stones and slope

357—Wagberg-Swakane-Rock outcrop complex, 45 to 90 percent slopes

Composition

Wagberg and similar soils—30 percent
Swakane and similar soils—30 percent
Rock outcrop—20 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes of hills
Parent material: Wagberg—glacial till with minor amounts of volcanic ash and loess in the upper part; Swakane—colluvium and residuum derived from gneiss and schist mixed with volcanic ash
Slope range: 45 to 90 percent
Elevation: 1,200 to 3,500 feet
Average annual precipitation: Wagberg—12 to 15 inches; Swakane—14 to 18 inches
Average annual air temperature: Wagberg—47 to 52 degrees F; Swakane—47 to 49 degrees F
Frost-free season (32 degrees F): Wagberg—120 to 150 days; Swakane—130 to 155 days
Rock fragments on surface: Wagberg and Swakane—stones cover 1 to 3 percent

Soil Properties

Typical profile of Wagberg:
0 to 5 inches—dark grayish brown stony fine sandy loam (upper part of surface layer)
5 to 13 inches—grayish brown cobbly sandy loam (lower part of surface layer)
13 to 38 inches—light brownish gray very cobbly sandy loam and pale brown very gravelly sandy loam (upper part of subsoil)
38 to 53 inches—light yellowish brown very cobbly coarse sandy loam (lower part of subsoil)
53 to 60 inches—yellowish brown very cobbly loamy sand (substratum)
Typical profile of Swakane:
0 to 2 inches—dark brown stony sandy loam (upper part of surface layer)
2 to 15 inches—yellowish brown very gravelly coarse sandy loam (lower part of surface layer)
15 to 19 inches—fractured gneiss
Depth class: Wagberg—very deep; Swakane—shallow
Drainage class: Well drained
Permeability: Wagberg—moderately rapid; Swakane—moderate
Available water capacity: Wagberg—moderately high; Swakane—very low

Rock Outcrop

Kind of rock: Granite, gneiss, and schist

Contrasting Inclusions

- Soils that have an extremely bouldery surface (Wagberg)
- Rubble land

Development Limitations

Wagberg
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—rock fragments in the surface layer and slope
Pipelines: Severe—rock fragments in the surface layer and slope
Livestock ponds: Severe—slope
Seeding: Severe—surface stones and slope
Brush control: Severe—surface stones and slope

Swakane
Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—depth to bedrock and slope
Pipelines: Severe—depth to bedrock and slope
Livestock ponds: Severe—depth to bedrock and slope
Seeding: Severe—depth to bedrock and slope
Brush control: Severe—slope

358—Wedge cindery sandy loam, 8 to 30 percent slopes

Composition

Wedge and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides and toeslopes
Parent material: Pumice and volcanic ash

Slope range: 8 to 30 percent
Elevation: 2,500 to 4,600 feet
Average annual precipitation: 40 to 55 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 40 degrees F
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 5 inches—brownish yellow cindery sandy loam (surface layer when mixed)
5 to 11 inches—brownish yellow and pale brown cindery sandy loam (upper part of subsoil)
11 to 31 inches—light yellowish brown and very pale brown very cindery sandy loam and extremely cindery loamy sand (lower part of subsoil)
31 to 60 inches—yellow and white cinders (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 31 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Chiwaukum and Fears)
- Soils that are somewhat poorly drained (Typic Cryaquands)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

359—Wedge cindery sandy loam, 30 to 60 percent slopes

Composition

Wedge and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Pumice and volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,500 to 4,600 feet
Average annual precipitation: 40 to 55 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 38 to 40 degrees F
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 60 to 90 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 5 inches—brownish yellow cindery sandy loam (surface layer when mixed)
5 to 11 inches—brownish yellow and pale brown cindery sandy loam (upper part of subsoil)
11 to 31 inches—light yellowish brown and very pale brown very cindery sandy loam and extremely cindery loamy sand (lower part of subsoil)
31 to 60 inches—yellow and white cinders (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 31 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Chiwaukum and Fears)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

360—Wedge cindery fine sandy loam, 8 to 30 percent slopes

Composition

Wedge and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides and toeslopes
Parent material: Pumice and volcanic ash
Slope range: 8 to 30 percent
Elevation: 3,000 to 5,500 feet
Average annual precipitation: 35 to 45 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 37 to 39 degrees F
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 55 to 85 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 5 inches—light yellowish brown cindery fine sandy loam (surface layer when mixed)

5 to 17 inches—light yellowish brown very cindery fine sandy loam and extremely cindery sandy loam (upper part of subsoil)
17 to 60 inches—yellow, white, and very pale brown cinders (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper 17 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Fears)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Soils that have a very gravelly fine sandy loam substratum (Wedgemont)
- Soils that are poorly drained or somewhat poorly drained (Typic Cryaquands)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Stable

361—Wedge cindery fine sandy loam, 30 to 60 percent slopes

Composition

Wedge and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Pumice and volcanic ash
Slope range: 30 to 60 percent
Elevation: 3,000 to 5,500 feet
Average annual precipitation: 35 to 45 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 37 to 39 degrees F (cryic)
Growing season (28 degrees F): 90 to 120 days
Frost-free season (32 degrees F): 55 to 85 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 5 inches—light yellowish brown cindery fine sandy loam (surface layer when mixed)
5 to 17 inches—light yellowish brown very cindery fine sandy loam and extremely cindery sandy loam (upper part of subsoil)
17 to 60 inches—yellow, white, and very pale brown cinders (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained

Permeability: Moderately rapid in the upper 17 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Fears)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Soils that have a very gravelly fine sandy loam substratum (Wedgemont)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Slump

362—Wedge-Typic Cryaquands complex, 0 to 15 percent slopes*

Composition

Wedge and similar soils—60 percent
Typic Cryaquands and similar soils—30 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Wedge—nearly level and gently sloping areas of valleys, and saddles and cirque basins of mountains; Typic Cryaquands—wet depressed meadows in valleys, and saddles and cirque basins of mountains
Parent material: Wedge—pumice and volcanic ash; Typic Cryaquands—volcanic ash and pumice mixed with alluvium
Slope range: 0 to 15 percent
Elevation: 4,800 to 5,500 feet
Average annual precipitation: 40 to 55 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 37 to 39 degrees F
Growing season (28 degrees F): Wedge—90 to 110 days; Typic Cryaquands—60 to 90 days
Frost-free season (32 degrees F): Wedge—55 to 85 days; Typic Cryaquands—60 to 90 days

Soil Properties

Typical profile of Wedge:
Organic mat on surface—1 inch thick
0 to 5 inches—light yellowish brown cindery fine sandy loam (surface layer when mixed)
5 to 17 inches—light yellowish brown very cindery fine sandy loam and extremely cindery sandy loam (upper part of subsoil)
17 to 60 inches—yellow, white, and very pale brown cinders (lower part of subsoil)
Reference pedon of Typic Cryaquands:
0 to 9 inches—dark grayish brown and brown silt loam (surface layer)

9 to 15 inches—mottled, very pale brown very fine sandy loam (upper part of subsoil)
15 to 24 inches—mottled, light gray fine sandy loam (middle part of subsoil)
24 to 60 inches—mottled, light gray fine sandy loam (lower part of subsoil)

Depth class: Very deep
Drainage class: Wedge—well drained; Typic Cryaquands—poorly drained and somewhat poorly drained
Permeability: Wedge—moderately rapid in the upper 17 inches and very rapid below this depth; Typic Cryaquands—moderate in the upper 15 inches and moderate to rapid below this depth
Available water capacity: Wedge—moderate; Typic Cryaquands—high
Seasonal high water table: Typic Cryaquands—present in March through August with the highest level (0.8 to 1.2 feet) in May through June

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Fears)
- Small areas of water

Operability Considerations

Wedge
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Stable

Development Limitations

Typic Cryaquands
Corrosivity: Uncoated steel—high; concrete—high
Fences: Severe—snow damage
Pipelines: Severe—seasonal high water table
Livestock ponds: Severe—seepage
Seeding: Severe—seasonal high water table
Brush control: Severe—wetness

363—Wedge association, 30 to 60 percent slopes*

Composition

Wedge and similar soils—50 percent
Wedge, cold, and similar soils—30 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Pumice and volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,500 to 4,600 feet
Average annual precipitation: Wedge—35 to 50 inches; Wedge, cold—40 to 55 inches
Snowpack: More than 3 feet in December through March

Average annual air temperature: Wedge—38 to 40 degrees F (cryic); Wedge, cold—37 to 39 degrees F (cryic)
Growing season (28 degrees F): Wedge—100 to 130 days; Wedge, cold—90 to 120 days
Frost-free season (32 degrees F): Wedge—60 to 90 days; Wedge, cold—55 to 85 days

Soil Properties

Typical profile of Wedge:
Organic mat on surface—1 inch thick
0 to 5 inches—brownish yellow cindery sandy loam (surface layer when mixed)
5 to 11 inches—brownish yellow and very pale brown cindery sandy loam (upper part of subsoil)
11 to 31 inches—light yellowish brown and pale brown very cindery sandy loam and extremely cindery loamy sand (lower part of subsoil)
31 to 60 inches—yellow and white cinders (substratum)
Typical profile of Wedge, cold:
Organic mat on surface—1 inch thick
0 to 5 inches—light yellowish brown cindery fine sandy loam (surface layer when mixed)
5 to 17 inches—light yellowish brown very cindery fine sandy loam and extremely cindery sandy loam (upper part of subsoil)
17 to 60 inches—yellow, white, and very pale brown cinders (lower part of subsoil)
Depth class: Very deep
Drainage class: Well drained
Permeability: Wedge—moderately rapid in the upper 31 inches and very rapid below this depth; Wedge, cold—moderately rapid in the upper 17 inches and very rapid below this depth
Available water capacity: Moderate

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Chiwaukum and Fears)
- Soils that have bedrock at a depth of 20 to 40 inches (Devore)
- Rock outcrop

Operability Considerations

Wedge
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Soft
Road rock: Not available
Cut and fill slope stability: Slump

Wedge, cold
Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Severe
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky and soft
Road rock: Not available
Cut and fill slope stability: Slump

364—Wedgemont very cindery fine sandy loam, 30 to 60 percent slopes

Composition

Wedgemont and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Mountainsides
Parent material: Volcanic ash and pumice
Slope range: 30 to 60 percent
Elevation: 4,000 to 5,500 feet
Average annual precipitation: 30 to 40 inches
Snowpack: More than 3 feet in December through March
Average annual air temperature: 39 to 42 degrees F (cryic)
Growing season (28 degrees F): 100 to 130 days
Frost-free season (32 degrees F): 65 to 95 days

Soil Properties

Typical profile:
Organic mat on surface—1 inch thick
0 to 1 inch—light gray very cindery fine sandy loam (surface layer when mixed)
1 to 19 inches—very pale brown very cindery fine sandy loam (upper part of subsoil)
19 to 28 inches—very pale brown extremely cindery sandy loam (lower part of subsoil)
28 to 60 inches—light brownish gray very gravelly fine sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Rapid in the upper 28 inches and moderate below this depth
Available water capacity: Moderately high

Contrasting Inclusions

- Soils that have more rock fragments in the subsoil (Surgh)
- Soils that have volcanic ash and pumice throughout the profile (Wedge)
- Soils that have a warmer temperature regime (Choralmont)
- Soils that have volcanic ash and are 0 to 20 percent pumice to a depth of 29 inches (Almac)

Operability Considerations

Compaction hazard (moist): Moderate
Puddling hazard (wet): Slight
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Readily available
Cut and fill slope stability: Slump

365—Wilma stony fine sandy loam, 30 to 60 percent slopes

Composition

Wilma and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Ridge crests and spur ridges on mountainsides that commonly have a southerly aspect
Parent material: Colluvium and residuum derived from granodiorite with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,500 to 5,800 feet
Average annual precipitation: 22 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 44 to 46 degrees F
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile:
0 to 4 inches—grayish brown stony fine sandy loam (surface layer)
4 to 12 inches—brown gravelly sandy loam (upper part of subsoil)
12 to 24 inches—light yellowish brown very gravelly fine sandy loam (lower part of subsoil)
24 to 37 inches—brownish yellow very gravelly loamy sand (substratum)
37 to 41 inches—unweathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate in the upper 24 inches and moderately rapid below this depth
Available water capacity: Low

Contrasting Inclusions

- Soils that have more than 35 percent pumice in the subsoil (Palmich and Ramparter)
- Soils that are deep (McCree)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Slump

366—Wilma-Rock outcrop complex, 30 to 60 percent slopes

Composition

Wilma and similar soils—75 percent
Rock outcrop—15 percent
Contrasting inclusions—10 percent

Map Unit Characteristics

Position on landscape: Mountainsides that have a southerly aspect

Parent material: Colluvium and residuum derived from granite with a mantle of volcanic ash
Slope range: 30 to 60 percent
Elevation: 2,500 to 5,800 feet
Average annual precipitation: 22 to 35 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 44 to 46 degrees F
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 1 to 3 percent

Soil Properties

Typical profile of Wilma:
0 to 4 inches—grayish brown stony fine sandy loam (surface layer)
4 to 12 inches—brown gravelly sandy loam (upper part of subsoil)
12 to 24 inches—light yellowish brown very gravelly fine sandy loam (lower part of subsoil)
24 to 37 inches—brownish yellow very gravelly loamy sand (substratum)
37 to 41 inches—unweathered granite
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate in the upper 24 inches and moderately rapid below this depth
Available water capacity: Low

Rock Outcrop

Kind of rock: Granitic

Contrasting Inclusions

- Soils that have more than 35 percent pumice in the subsoil (Palmich and Ramparter)
- Soils that are deep or very deep (McCree and Icicle)
- Rubble land

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and sticky
Road rock: Readily available
Cut and fill slope stability: Slump

367—Yaxing loam, 8 to 15 percent slopes

Composition

Yaxing and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Footslopes and toeslopes of foothills that have a northerly aspect
Parent material: Residuum and colluvium derived from sandstone mixed with loess in the upper part
Slope range: 8 to 15 percent

Elevation: 1,000 to 3,200 feet
Average annual precipitation: 16 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 46 to 48 degrees F
Growing season (28 degrees F): 150 to 190 days
Frost-free season (32 degrees F): 110 to 150 days

Soil Properties

Typical profile:
0 to 9 inches—grayish brown loam (upper part of surface layer)
9 to 21 inches—brown loam (lower part of surface layer)
21 to 36 inches—pale brown loam (subsoil)
36 to 60 inches—pale brown loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that receive less rainfall (Yaxon)
- Soils that have bedrock at a depth of 10 to 20 inches (Borland)
- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Stable

368—Yaxing loam, 30 to 60 percent slopes

Composition

Yaxing and similar soils—80 percent
Contrasting inclusions—20 percent

Map Unit Characteristics

Position on landscape: Backslopes of foothills that have a northerly aspect
Parent material: Residuum and colluvium derived from sandstone mixed with loess in the upper part
Slope range: 30 to 60 percent
Elevation: 1,000 to 3,200 feet
Average annual precipitation: 16 to 18 inches
Snowpack: More than 1 foot in December through February
Average annual air temperature: 46 to 48 degrees F
Growing season (28 degrees F): 150 to 190 days
Frost-free season (32 degrees F): 110 to 150 days

Soil Properties

Typical profile:
0 to 9 inches—grayish brown loam (surface layer)
9 to 21 inches—brown loam (lower part of surface layer)

21 to 36 inches—pale brown loam (subsoil)
36 to 60 inches—pale brown loam (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Contrasting Inclusions

- Soils that receive less rainfall (Yaxon)
- Soils that have bedrock at a depth of 10 to 20 inches (Borland)
- Soils that have bedrock at a depth of 20 to 40 inches (Cle Elum)
- Rock outcrop

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Moderate
Displacement hazard (dry): Slight
Dust hazard: Severe
Unsurfaced roads and skid trails (wet): Sticky
Road rock: Not available
Cut and fill slope stability: Slump

369—Yaxon silt loam, 8 to 15 percent slopes

Composition

Yaxon and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Footslopes of foothills
Parent material: Residuum derived from sandstone and schist mixed with loess in the upper part
Slope range: 8 to 15 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 14 to 15 inches
Average annual air temperature: 47 to 50 degrees F
Frost-free season (32 degrees F): 135 to 175 days

Soil Properties

Typical profile:
0 to 14 inches—dark grayish brown silt loam (surface layer)
14 to 40 inches—brown and yellowish brown clay loam (subsoil)
40 to 60 inches—pale brown clay loam (substratum)

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 14 inches and moderately slow below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that receive more rainfall (Yaxing and Oldbutte)
- Soils that receive less rainfall (Cowiche)

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low

Fences: Slight
Pipelines: Slight
Livestock ponds: Moderate—slope
Seeding: Slight
Brush control: Slight

370—Yaxon silt loam, 15 to 30 percent slopes

Composition

Yaxon and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes and footslopes of foothills
Parent material: Residuum and colluvium derived from sandstone and schist mixed with loess in the upper part
Slope range: 15 to 30 percent
Elevation: 2,000 to 3,600 feet
Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 50 degrees F
Frost-free season (32 degrees F): 135 to 175 days

Soil Properties

Typical profile:
0 to 14 inches—dark grayish brown silt loam (surface layer)
14 to 40 inches—brown and yellowish brown clay loam (subsoil)
40 to 60 inches—pale brown clay loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 14 inches and moderately slow below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Bjork)
- Soils that receive less rainfall (Cowiche)
- Soils that have more clay and rock fragments in the subsoil (Tronsen)
- Soils that receive more rainfall (Yaxing and Oldbutte)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Moderate—slope
Pipelines: Moderate—slope
Livestock ponds: Severe—slope
Seeding: Moderate—slope
Brush control: Moderate—slope

371—Yaxon silt loam, 30 to 45 percent slopes

Composition

Yaxon and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes of foothills and mountains
Parent material: Residuum and colluvium derived from sandstone and schist mixed with loess in the upper part
Slope range: 30 to 45 percent
Elevation: 2,000 to 4,200 feet
Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 50 degrees F (mesic)
Frost-free season (32 degrees F): 135 to 175 days

Soil Properties

Typical profile:
  0 to 14 inches—dark grayish brown silt loam (surface layer)
  14 to 40 inches—brown and yellowish brown clay loam (subsoil)
  40 to 60 inches—pale brown clay loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 14 inches and moderately slow below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Bjork)
- Soils that receive less rainfall (Cowiche)
- Soils that have more clay and rock fragments in the subsoil (Tronsen)
- Soils that receive more rainfall (Yaxing and Oldbutte)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

372—Yaxon silt loam, 45 to 65 percent slopes

Composition

Yaxon and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes of foothills and mountains
Parent material: Colluvium and residuum derived from sandstone and schist mixed with loess in the upper part
Slope range: 45 to 65 percent
Elevation: 2,000 to 4,200 feet
Average annual precipitation: 12 to 15 inches
Average annual air temperature: 47 to 50 degrees F
Frost-free season (32 degrees F): 135 to 175 days

Soil Properties

Typical profile:
 0 to 14 inches—dark grayish brown silt loam (surface layer)
 14 to 40 inches—brown and yellowish brown clay loam (subsoil)
 40 to 60 inches—pale brown clay loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 14 inches and moderately slow below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that have bedrock at a depth of 20 to 40 inches (Bjork)
- Soils that receive less rainfall (Cowiche)
- Soils that have more clay and rock fragments in the subsoil (Tronsen)
- Soils that receive more rainfall (Yaxing and Oldbutte)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

373—Yaxon silt loam, 45 to 65 percent north slopes

Composition

Yaxon and similar soils—85 percent
Contrasting inclusions—15 percent

Map Unit Characteristics

Position on landscape: Backslopes, of foothills and mountains, that have a northerly aspect
Parent material: Colluvium and residuum derived from sandstone mixed with loess in the upper part
Slope range: 45 to 65 percent
Elevation: 1,200 to 4,200 feet
Average annual precipitation: 14 to 16 inches
Average annual air temperature: 46 to 49 degrees F
Frost-free season (32 degrees F): 120 to 160 days

Soil Properties

Typical profile:
 0 to 16 inches—grayish brown silt loam (surface layer)
 16 to 54 inches—brown and yellowish brown clay loam (subsoil)
 54 to 60 inches—yellowish brown loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper 16 inches and moderately slow below this depth
Available water capacity: High

Contrasting Inclusions

- Soils that receive more rainfall (Yaxing and Oldbutte)
- Soils that have more clay and rock fragments in the subsoil (Tronsen)
- Rock outcrop

Development Limitations

Corrosivity: Uncoated steel—moderate; concrete—low
Fences: Severe—slope
Pipelines: Severe—slope
Livestock ponds: Severe—slope
Seeding: Severe—slope
Brush control: Severe—slope

374—Zeb stony sandy loam, 3 to 30 percent slopes

Composition

Zeb and similar soils—75 percent
Contrasting inclusions—25 percent

Map Unit Characteristics

Position on landscape: Alluvial fans and terraces
Parent material: Alluvium
Slope range: 3 to 30 percent
Elevation: 1,600 to 2,500 feet
Average annual precipitation: 24 to 40 inches
Snowpack: More than 1 foot in December through March
Average annual air temperature: 42 to 44 degrees F
Growing season (28 degrees F): 135 to 175 days
Frost-free season (32 degrees F): 90 to 120 days
Rock fragments on surface: Stones cover 2 to 3 percent

Soil Properties

Typical profile:
Organic mat on surface—0.5 inch thick
0 to 2 inches—gray stony sandy loam (upper part of surface layer)
2 to 11 inches—brown gravelly sandy loam (lower part of surface layer)
11 to 28 inches—pale brown very cobbly sandy loam (subsoil)
28 to 60 inches—pale brown very cobbly coarse sandy loam (substratum)
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Moderate
Frequency of flooding: Rare

Contrasting Inclusions

- Soils that are extremely cobbly loamy coarse sand between depths of 18 and 60 inches (Mippon)
- Soils that are extremely cobbly sand between depths of 21 and 60 inches (Kladnick)
- Soils that are volcanic ash and pumice throughout the profile (Ramparter)
- Soils that are very gravelly loamy sand between depths of 11 and 60 inches (Palmont)

Operability Considerations

Compaction hazard (moist): Severe
Puddling hazard (wet): Severe
Displacement hazard (dry): Moderate
Dust hazard: Moderate
Unsurfaced roads and skid trails (wet): Slippery and soft
Road rock: Readily available
Cut and fill slope stability: Stable

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading “Detailed Soil Map Units.” Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Each of the soils of the survey area that are used for hay and pasture are rated according to limitations that affect fences, pipelines, livestock ponds, seeding, and brush control. The degree of limitation is expressed as slight, moderate, or severe. Slight means that the soil properties and site features are generally favorable for the indicated development. Moderate means that the soil properties and site features are not favorable for the indicated development and special planning, design, equipment, or maintenance is needed. Severe means that the soil properties or site features are so unfavorable or difficult to overcome that special planning and design, significant increases in cost, and possibly much increased maintenance are required. The ratings are given under the heading “Detailed Soil Map Units.” More information on the risk of corrosion is given in the “Soil Properties” section and in table 17.

The rating for fences refers to the degree of difficulty that can be expected in installing and maintaining fencelines for livestock control. The limitations are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting fencepost holes is affected by depth to bedrock, dense material, or a hardpan; rock fragments; soil texture; and steepness of slope. The depth to a seasonal high water table and the hazard of flooding affect the time of year when fences can be installed. Maintenance costs and fence design are affected by the amount of snow damage expected. Corrosivity to uncoated steel can affect the selection of fencepost material.

The rating for pipelines refers to the degree of difficulty in installing and maintaining pipelines for livestock water developments. The limitations are based on soil properties, site features, and observed performance of the soils. The ease of excavating, filling, and compacting a pipeline trench is affected by depth to bedrock, dense material, or a hardpan; rock fragments; soil texture; and steepness of slope. The depth to a seasonal high water table and the hazard of flooding affect the time of year that excavations can be made. Soil texture and depth to the water table affect the resistance of the excavation walls to sloughing or caving. Corrosivity to uncoated steel and concrete can affect the selection of pipeline material.

The rating for ponds refers to the degree of difficulty that can be expected in constructing and maintaining small ponds for watering livestock. The limitations are based on soil properties, site features, and observed performance of the soils. The ease of excavating is affected by depth to bedrock, dense material, or a thick hardpan and by steepness of slope. Soil permeability affects the seepage potential; ponds constructed in soils that have moderate permeability or higher may need linings or clay blankets to reduce the risk of seepage. Excessive slope can affect the storage capacity of ponds. Corrosivity to uncoated steel and concrete can affect the types of material that can be used to construct ponds.

The rating for seeding refers to the degree of difficulty that can be expected in seeding an area of rangeland with mechanical ground equipment such as a rangeland drill, disc drill, or deep furrow drill. Soil properties that restrict the types of adapted plant species are also considered. The suitability of a soil for broadcast seeding is not considered. The limitations are based on soil properties, site features, and observed performance of the soils. Mechanical seedbed preparation and planting operations are affected by steepness of slope, soil texture, stones and boulders on or near the soil surface, rock fragments in the surface layer, and depth to bedrock. The time of year when seeding can be done is affected by a seasonal high water table and the hazard of flooding.

The selection of adapted plant species is an important consideration for successful seeding. Soil properties that affect species selection are depth to bedrock, dense material, or a hardpan; available water capacity; excessive salinity and sodicity; a seasonal high water table; and hazard of flooding.

The rating for brush control refers to the degree of difficulty that can be expected in using mechanical methods to control brush. Mechanical brush management methods include chaining, railing, disking, and using rollers or brush beaters. The ratings are based on soil properties and site features. Steepness of slope and the presence of surface stones and boulders are the main soil properties that limit the operation of brush management equipment. The presence of a seasonal high water table and the hazard of flooding affect the time of year when brush management operations are suitable.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 5. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 5 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops (USDA, 1961). Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit. Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

The acreage of soils in each capability class or subclass is shown in table 4. The capability classification of map units in this survey area is given in table 5.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation’s short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation’s prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 2,000 acres, or nearly 0.1 percent of the survey area, would meet the requirements for prime farmland if an adequate and dependable supply of irrigation water were available. The map units in the survey area that are considered prime farmland are listed in this section. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

The map units that meet the requirements for prime farmland if irrigated are:

37	Billyridge gravelly sandy loam, 0 to 8 percent slopes
52	Burch loam, 3 to 8 percent slopes

Grazeable Land

In areas that have similar climate and topography, differences in the kind and amount of rangeland or forest understory vegetation are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

Table 6 shows, for each soil that supports rangeland vegetation suitable for grazing, the ecological site; the total annual production of vegetation in favorable, normal, and unfavorable years; the characteristic vegetation; and the average percent composition, by weight, of each species. It also shows, for each soil that supports forest understory vegetation suitable for grazing, the plant association, the characteristic vegetation, and the average percent composition, by canopy cover, of each species. An explanation of the column headings in table 6 follows.

An *ecological site or plant association* is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of the site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site or plant association is typified by an association of species that differs from that of other ecological sites or plant associations in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources

Conservation Service. Descriptions of plant associations are found in the “Field Guide for Forested Plant Associations of the Wenatchee National Forest” (USDA, 1995).

Total dry-weight production is directly related to rangeland. It is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year’s growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Characteristic vegetation—the grasses, forbs, and shrubs that make up most of the potential natural plant community on each soil—is listed by common name. Under *rangeland composition*, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season. For rangeland sites, composition is expressed in percent by weight. For forestland sites, the composition is expressed in percent by canopy cover.

Proper management of livestock grazing on rangeland or forestland requires a knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland or forestland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the “National Range and Pasture Handbook” http://www.nrcs.usda.gov/technical.

The objective in range or forest understory management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Forest Productivity and Management

By Dennis J. Robinson, State forester, and Ron Peyton and Jerry Smith, foresters, Natural Resources Conservation Service.

Of the 120 soil series mapped in the survey area, 99 are considered to be forested soils. Of these, 94 are considered to have the potential to produce at least one commercial tree species and are classified as prime forestland. Prime forestland is that which has the potential to produce, measured as the mean annual incremental growth, at least 85 cubic feet per acre (Cochran, 1979). Of the 1,532,289 acres in the survey area, about 845,000 acres, or about 55 percent of the total acreage, are forested.

Fifty-nine percent of the forestland in the survey area is National or State land or other public land. Of the total forestland in the area, private owners manage about

319,000 acres, or 38 percent. Of this, about 193,000 acres are managed by large corporations (McKay and others, 1995).

Forest Ecology and Productivity

Moisture and topography greatly affect the characteristics of forests. In this survey area, which consists largely of the Wenatchee and Okanogan National Forests, the vegetation and ecology differ from other areas in eastern Washington. The forestland in the eastern part of the survey area consists of timber stands scattered along canyonsides and in narrow bands on canyon bottoms. These meandering strips of timber merge into sparse stands of ponderosa pine. The ponderosa pine stands are adjacent to stands of higher density mixed conifer species in areas that are cooler and moister. As a result, a significant portion of the timber in the survey area is within a 30-mile-wide band east of the crest of the Cascade Mountains.

At the westernmost extent of the survey area, the crest of the Cascade Mountains represents a major ecological border. To the north, Lake Chelan also provides a natural barrier. To the south, the Wenatchee Mountains form a topographic barrier between the survey area and the Kittitas Valley. The survey area is bounded on the east by the Columbia River, which separates the dry ponderosa pine forests from the shrub steppe of the Columbia Plateau.

The east to west transition from areas of low annual precipitation to moist maritime conditions is a major influence on the plant species and plant community distribution. The Cascade Mountains cause a rainshadow effect that significantly reduces the amount of precipitation received across the survey area. The west to east orientation and width of the ridges greatly influence the climatic patterns and thus also influence the distribution of specific overstory species, such as Pacific silver fir, mountain hemlock, western hemlock, and western red cedar.

The survey area has nine distinct forest cover types. There are also six riparian types, as identified by a preliminary riparian and wetland site classification system for the Colville, Wenatchee, and Okanogan National Forests (Kovalchik and Kelley, 1998). The forest cover types consist of species considered to be of more commercial value than other cover types (USDA, 1995). Species included are ponderosa pine, interior Douglas fir, grand fir, western hemlock, Pacific silver fir, mountain hemlock, subalpine fir, whitebark pine, and coast Douglas fir. Coast Douglas fir and Pacific silver fir are at the higher elevations, near the crest of the Cascade Mountains and in cooler mountain valleys and drainageways. Minor forest cover types recognized in the survey area consist of species such as mountain hemlock, Engelmann spruce, subalpine fir, whitebark pine, western larch, lodgepole pine, black cottonwood, and willow.

Forest Management Considerations

Interior Douglas fir and ponderosa pine produce a significant percentage of the available cubic-foot volume of commercial sawtimber in the survey area (Cochran, 1979; Meyer, 1961). Other sources of wood volume include true firs, hemlocks, western larch, lodgepole pine, and other minor coniferous and deciduous species (Alexander, 1966; Alexander, 1967; Barnes, 1962; Cochran, 1979; Cochran, 1985; MacLean and Bolsinger, 1973; Meyer, 1961; and Schmidt and others, 1976). Tree mortality is a normal and continuous concern, and it results in a considerable supply of salvable dead sawtimber. The sporadic nature of the mortality or lack of concentrated salvable timber commonly makes harvesting a significant portion of this material economically unfeasible. Historic harvesting and production of traditional sawn wood products in the survey area was based on the availability of large-diameter logs. With continued harvesting and reforesting efforts, second-growth, smaller diameter logs have been added to the market. This has resulted in technological innovations at mills and other production facilities. Product diversification and the changing economy have resulted in a demand for smaller diameter logs of both major and minor tree species.

Wildfire has played a significant role in the forests of the survey area, particularly in the ponderosa pine stands. Historically, Native Americans underburned mature ponderosa pine stands to promote the growth of forage for horses. In addition, archaic logging practices have contributed to the growth of pioneer species and the conversion of mixed ponderosa pine-Douglas fir stands to pure, stagnant stands of Douglas fir and lodgepole pine. The discontinuation of underburning and stand replacement fires has contributed to a forest health concern. Current harvesting practices and reforestation methods with the use of improved genetic tree stock have begun to return many of the forest stands to diverse areas of mixed ponderosa pine and Douglas fir (USDA, 1995).

Forest health encompasses a variety of concerns, including tree diseases and insect infestations, which are major problems in the survey area. Insects and diseases are endemic to the survey area, and the extent of the damage they cause varies from year to year. Normally, losses are confined to individual trees scattered across a landscape or to a particular forest type. Root rot, such as annosus root rot and armillaria root rot, is a more consistent mortality agent to individual trees and groups of trees than some other fungus-type diseases. Mistletoe disease (*Arceuthobium spp.*), generally referred to as dwarf mistletoe disease, is widespread in the survey area and is a major factor in tree mortality and wood volume loss. It is specific to individual tree species. The most prevalent dwarf mistletoe disease is that specific to ponderosa pine, Douglas fir, western larch, and lodgepole pine. Efforts to control dwarf mistletoe can be costly; early detection and removal of infected overstory trees can help to protect seedlings and saplings in the understory (USDA, 1971).

Insects have the potential to cause individual tree mortality as well as expand their area of impact to include adjacent healthy trees or stands of trees. Environmental factors, such as climate, can result in growth of the insect population and increased infestation (USDA, 1977). The most damaging insect in the survey area is the mountain pine beetle (*Dendroctonus ponderosae*). It attacks lodgepole pine, western white pine, and young stands of ponderosa pine. The Douglas fir beetle (*Dendroctonus pseudotsugae*), silver fir beetle (*Pseudohylesinus sericeus*) and western pine beetle (*Dendroctonus brevicomis*) have also caused extensive damage to tree stands of all ages. Recently, outbreaks of the western spruce budworm (*Choristoneura occidentalis*) have caused severe damage in stands of Douglas fir and other species such as western larch, grand fir, subalpine fir, and Engelmann spruce. The Douglas fir tussock moth (*Orgyia pseudotsugata*) can cause widespread defoliation in Douglas fir stands. Populations of this insect have grown significantly and as a result have been monitored across the West. The balsam woolly aphid (*Adelges piceae*) has become widely established and is highly destructive to Pacific silver fir, subalpine fir, and grand fir.

Forest management in the survey area ranges from little, if any, to use of intensive cultural practices, such as fertilization, and stand improvement practices, such as pre-commercial thinning and pruning. Managers of stands commonly design the implementation of these practices to a preset timetable.

Present stands vary widely in species composition, age, and diameter distribution. Stands growing at the lower elevations generally have been selectively harvested with the intent of removing higher value ponderosa pine and Douglas fir trees. This selective harvesting strategy has resulted in a wide disparity in the distribution of primarily Douglas fir. In addition, historical wildfires have resulted in densely stocked lodgepole pine and western larch stands in numerous areas across the survey area. Unless a thinning program is implemented as part of the forest management plan, a majority of the densely stocked, stagnant tree stands will continue to grow slowly and be of less value at maturity.

Soil surveys have become increasingly more important to forestland owners and managers as they seek ways to increase productivity of the forest resource while maintaining soil productivity and health. Climate, elevation, and aspect determine the kinds of trees that can be expected to inhabit an individual site, especially in the mountainous areas. Depth, fertility, texture, and available water capacity of a soil greatly influence tree growth. All of these factors are incorporated into the design and identifying features of each map unit in the section “Detailed Soil Map Units.” The success of forest management practices can be predicted through knowledge of the properties of various soils (USDA, National Forestry Manual).

Stand establishment is a concern that affects the production of timber in the survey area. Viable commercial species consist of both coniferous and hardwood species (USDA, 1995). Hand planting of selected seedlings is the most common method of establishment. Natural regeneration, however, does occur in areas that have been disturbed and one to several seed trees are present. Natural regeneration commonly results in a diverse stand that has a strong component of hardwood trees established with a coniferous stand. The proportion of undesirable species that become established varies in naturally regenerated stands. Red alder, a hardwood pioneer species of some commercial value, can become established on disturbed sites at lower elevations and can limit establishment of future coniferous forests. Early-season accumulations of ice on young immature stands can damage the top growth in all tree species.

Some soils in the survey area are influenced by serpentine mineralogy. The overstory vegetation is characterized by stands that have developed under toxic soil conditions. Individual trees may be stunted or deformed. Reestablishing a stand on soils influenced by serpentine mineralogy is difficult. Seedlings grown from a seed source on similar soils should be used for reforestation. The seed trees should be taken from the site prior to harvest. Harvesting seed trees, leaving the best seed trees on a site, and controlling plant competition will help to ensure seedling survival and viability.

Droughtiness of the surface layer is a concern to forest managers. It can be a result of limited rainfall, low available water capacity, or high ambient temperatures during the growing season. Alone or in combination, these factors can severely impact the survival of newly planted seedlings. Adequate water for seedling establishment is especially critical in sandy soils and in soils that have a high content of rock fragments. A high content of coarse volcanic ash and cinders near the surface in some soils also results in a high seedling mortality rate because the soils have a low available water capacity. Harvesting practices and high-temperature wildfires that remove the protective layer of duff, organic matter, or volcanic ash along with persistent winds that dry out the soil can limit seedling survival. Persistent winds are common on exposed ridge crests, side slopes, constrictions in wide valleys, and alluvial fans at the head of major drainageways.

Typically, the plant nutrients in soils that formed in glacial outwash or at high elevations are concentrated in the dark layers near the surface. The fertility of the soil can be seriously reduced if these layers, which can contain coarse silt or very fine sand-sized volcanic ash and have a high available water capacity, are carelessly harvested or are intensively burned.

When wet, soils that have a fine or medium textured surface layer can be subject to compaction and rutting. Compaction reduces the seedling survival rate and the growth rate of the more mature trees by restricting permeability and root development. Compaction can reduce the quality of a site by as much as 10 percent. Rutting can expose tree roots to damage by ground-based harvesting equipment.

A high water table during the growing season can also restrict root growth and development. Productivity can be reduced by restricted root growth. Saturated soils that have a high water table can be invaded by undesirable deciduous species. Shallow-rooted species growing in soils with a high water table are subject to windthrow. Wheeled and tracked ground-based harvesting equipment should be used only during drier periods when the soils are not saturated.

The main limitation affecting timber harvesting is steepness of slope. The use of ground-based harvesting equipment on slopes of more than 30 percent is generally considered unsafe. Cable systems are safer and disturb the surface less.

The material underlying the surface layer generally plays a significant role in road construction activities, especially in steep areas. Soil characteristics are important in gently sloping areas and poorly drained areas. Soil parent material, such as glacial outwash and alluvium, and unweathered bedrock provide a stable base for roadbuilding. These types of road construction materials can be located easily. Mass movement associated with slope instability is a concern for forest management. Roads built in steep areas underlain by breccia, phyllite, or sandstone or in thick deposits of volcanic ash or cinders are subject to mass movement. In areas where the underlying parent material has the same slope orientation as the slope of the map unit, mass wasting and failure are concerns. Material that is cast to the side during road construction may slough when saturated. Roads constructed on gently sloping soils that are fine or medium textured require suitable surfacing for year-round use. Roads constructed in poorly drained areas require a thicker surface road base and generally require extra culverts. Steep roadcuts in areas of dry outwash will ravel.

Soil erosion on forestland generally is of minor concern. Tree stands that have a long history of harvesting activities may be subject to overland flows and offsite sediment transport as a result of extreme rain or snow events. Roads and firebreaks can be a source of sediment, which can cause concerns for water quality and fish passage if associated with bodies of water or stream courses. Rill and gully erosion may occur in areas of forestland where the surface layer has been manipulated or destroyed during harvesting.

For each soil that supports forestland, the interpretive ratings for various aspects of forest management are given under the heading “Detailed Soil Map Units.” The map units give interpretive ratings for compaction hazard (moist), puddling hazard (wet), displacement hazard (dry), dust hazard, unsurfaced roads and skid trails (wet), road rock, and cut and fill slope stability.

Compaction hazard (moist) is the susceptibility of the soil, under moist conditions, to compaction as a result of equipment use. Soil compaction can have a long-term detrimental effect on site quality. The ratings of slight, moderate, and severe are based on observations, characteristics of the organic surface material, and properties of the upper 12 inches of the mineral soil. The soil properties considered in the ratings include soil texture; thickness of the O horizon; rock fragment content, size, and shape; and soil structure. In areas that have slopes of more than 35 percent, equipment use is limited and thus the compaction hazard rating is based on the effect, at impact point, of falling trees.

Puddling hazard (wet) is the susceptibility of the soil, under wet conditions, to puddling as a result of equipment use. The ratings of slight, moderate, and severe are based on characteristics of the organic surface material and properties of the upper 12 inches of the mineral soil. The soil properties considered in the ratings include soil texture; thickness of the O horizon; rock fragment content, size, and shape; and soil structure. A moderate rating may indicate a need to restrict equipment use to designated skid trails. A severe rating may indicate a need to limit equipment use to drier periods or to areas that are covered with snow or are frozen.

Displacement hazard (dry) is the susceptibility of the soil surface, under dry conditions, to displacement as a result of equipment use. The soil properties considered in the ratings include soil texture, thickness of the O horizon, and rock fragment content. A slight rating indicates that equipment use would displace a minimal amount of the soil surface, a moderate rating indicates that equipment use should be restricted to designated areas, and a severe rating indicates that all equipment use should be limited to specific periods, such as when the soil is covered with snow.

Dust hazard refers to the risk of particles becoming airborne during periods of disturbance when the soil is dry. The ratings are based on observation and are strictly subjective. A slight rating indicates that vehicular traffic would produce minimal amounts of airborne particulates. A moderate rating indicates that vehicular traffic should be restricted unless dust abatement measures are applied. A severe rating indicates that vehicular traffic should be restricted and dust abatement measures are needed.

Unsurfaced roads and skid trails (wet) refers to use, under wet or nearly saturated conditions, by rubber-tired skidders, pickup trucks, and log trucks. The rating is based on the soil material only, without the addition of base rock. The ratings are soft, slippery, sticky, and firm. A rating of firm indicates that there is sufficient rock and soil material to provide an adequate surface for vehicles and that there is adequate soil drainage throughout the upper 12 inches of the soil.

Road rock refers to the accessibility and grade of the underlying material or bedrock for use as base rock for road construction. A rating of readily available indicates that the soil material above the bedrock is less than 10 feet thick and that the rock is of sufficient strength or grade to be used as base rock for roads. The kind of rock, such as granitic, volcanic, or metamorphic rock or rounded gravel and cobbles, is also given. A rating of not readily available indicates that the soil is not suitable as a source of base rock for road construction.

Cut and fill slope stability refers to the susceptibility of the exposed soil to raveling when dry and to slumping or sloughing when wet. The ratings are based on observation of road cut and fill slopes. A rating of stable indicates that raveling, slumping, and sloughing were not apparent or were observed only occasionally. Stability typically is a concern in areas that have slopes of 50 percent or more.

The tables in this section can help forest owners or managers plan the use of soils for timber production. They show the potential productivity of the soils and rate the soils according to the limitations that affect various aspects of forest management.

Forest Productivity

In table 7, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forest Management

In tables 8a through 8e, interpretive ratings are given for various aspects of forest management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. *Well suited* indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified forest management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for fire damage and seedling mortality are expressed as *low, moderate,* and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for forest management practices. More detailed information about the criteria used in the ratings is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet http://www.soils.usda.gov/technical.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance; and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreation

The soils of the survey area are rated in tables 9a and 9b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical.

Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 9a and 9b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999) and “Keys to Soil Taxonomy” (Soil Survey Staff, 1998) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 1998).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

The following map units meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1998).

26	Aquic Cryumbrepts, nearly level to gently sloping
112	Fluvaquents, nearly level
339	Typic Cryaquands, nearly level to gently sloping
362	Wedge-Typic Cryaquands complex, 0 to 15 percent slopes

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading “Soil Properties.”

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 10a and 10b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Tables 11a and 11b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Table 12 gives information about the soils as potential sources of reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated *good, fair,* or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, or topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 13 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 14 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2001; PCA, 1973) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2000; PCA, 1973).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Physical Properties

Table 15 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 15, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (K_{sat}) refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 15, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in table 15 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 16 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Soil Features

Table 17 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Water Features

Table 18 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table 18 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 18 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if

0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1998 and 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 19 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Xeralf (*Xer*, meaning dry, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Haploxeralfs (*Hapl*, meaning minimal horizonation, plus *xeralf*, the suborder of the Alfisols that has a xeric moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Ultic* identifies the subgroup that typifies the great group. An example is Ultic Haploxeralfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is loamy-skeletal, mixed, frigid Ultic Haploxeralfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Taxonomic Units and Their Morphology

In this section, each taxonomic unit recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each unit. A pedon, a small three-dimensional area of soil, that is typical of the taxonomic unit in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (Soil Survey Staff, 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff, 1998). Unless otherwise indicated, colors in the descriptions are for dry soil. Following the pedon description is the range of important characteristics of the soils in the taxonomic unit.

Aeric Fluvaquents

Aeric Fluvaquents consists of very deep, somewhat poorly drained soils on flood plains. These soils formed in alluvium mixed with volcanic ash. Slope is 0 to 2 percent. Elevation is 1,500 to 3,500 feet. The average annual precipitation is 22 to 65 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 80 to 110 days.

Reference pedon of Aeric Fluvaquents, nearly level, 1,100 feet west and 1,000 feet north of the southeast corner of sec. 3, T. 26 N., R. 16 E.

A—0 to 8 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; moderate medium granular structure; soft, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine tubular pores; neutral; gradual wavy boundary.

BA—8 to 16 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist with common fine distinct brown (7.5YR 5/2) mottles; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and few fine tubular pores; slightly acid; gradual wavy boundary.

Bw—16 to 27 inches; grayish brown (10YR 5/2) silt loam, dark grayish brown (10YR 4/2) moist with many medium prominent strong brown (7.5YR 5/6) mottles; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine and few fine tubular pores; neutral; clear wavy boundary.

C1—27 to 36 inches; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist with many medium prominent strong brown (7.5YR 5/6) mottles; massive; soft, very friable, nonsticky and nonplastic; common very fine roots; few fine tubular pores; slightly acid; clear wavy boundary.

2C2—36 to 44 inches; gray (10YR 6/1) sand, dark gray (10YR 4/1) moist with many medium prominent strong brown (7.5YR 5/6) mottles; single grain; loose, nonsticky and nonplastic; few very fine roots; common fine tubular pores; 5 percent pebbles; neutral; clear wavy boundary.

2C3—44 to 60 inches; multicolored and mottled gravelly sand; single grain; loose, nonsticky and nonplastic; many fine irregular pores; 20 percent pebbles; neutral.

The profile is slightly acid or neutral. The upper part of the control section has an admixture of volcanic ash and is 0 to 5 percent pebbles, and the lower part is 5 to 20 percent pebbles. An apparent water table is present in January through December, but it is at its highest level (0.7 to 1.3 feet) in March and April. Occasional, brief periods of flooding occur in February through May.

The A horizon has value of 4 or 5 dry and 2 or 3 moist and chroma of 1 or 2 dry or moist. It is silt loam.

The Bw horizon has value of 5 or 6 dry and 3 or 4 moist and chroma of 1 to 3 dry or moist. It is silt loam, loam, or clay loam.

The C1 horizon has value of 5 to 7 dry and 4 or 5 moist and chroma of 1 to 3 dry and 2 or 3 moist. It is sandy loam, loam, or clay loam.

The 2C horizon has value of 5 to 7 dry and 4 or 5 moist and chroma of 1 to 3 dry or moist. It is sand, loamy sand, gravelly coarse sand, gravelly sand, clay loam, sandy loam, or loam.

Almac Series

The Almac series consists of very deep, well drained soils on mountainsides. These soils formed in volcanic ash over colluvium and residuum derived from schist and gneiss. Slope is 3 to 90 percent. Elevation is 3,200 to 6,000 feet. The average annual precipitation is 35 to 55 inches, the average annual air temperature is 38 to 40 degrees F, and the frost-free season at 32 degrees is 60 to 100 days.

Typical pedon of Almac fine sandy loam, 3 to 30 percent slopes, 1,100 feet north and 25 feet east of the southwest corner of sec. 18, T. 26 N., R. 19 E., W.M.

O—2.5 inches to 0; undecomposed and partially decomposed forest litter.

E—0 to 1 inch; light gray (10YR 7/1) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine irregular pores; 10 percent pumice; strongly acid; abrupt broken boundary.

Bs1—1 to 3 inches; light yellowish brown and yellowish brown (10YR 6/4 and 5/4) fine sandy loam, dark yellowish brown and dark brown (10YR 4/4 and 4/3) moist; moderate fine subangular blocky structure; slightly hard, firm, nonsticky and nonplastic; many very fine, fine, medium, and coarse roots; many very fine irregular pores; 10 percent pumice and 5 percent pebbles; strongly acid; abrupt broken boundary.

Bs2—3 to 12 inches; yellowish brown and light yellowish brown (10YR 5/4 and 6/4) fine sandy loam, dark yellowish brown and yellowish brown (10YR 4/4 and 5/4) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots and common medium and coarse roots; many very fine irregular pores; 3 percent pumice and 2 percent pebbles; slightly acid; gradual wavy boundary.

Bs3—12 to 23 inches; light yellowish brown and yellowish brown (10YR 6/4 and 5/4) sandy loam, yellowish brown and dark yellowish brown (10YR 5/4 and 4/4) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine irregular pores; 7 percent pumice and 3 percent pebbles; slightly acid; clear wavy boundary.

2Bt1—23 to 29 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; few patchy faint clay films on faces of peds and in pores; common very fine and fine and few medium and coarse roots; few fine irregular pores; 12 percent pebbles and 13 percent soft schist fragments; slightly acid; gradual wavy boundary.

2Bt2—29 to 38 inches; light yellowish brown and very pale brown (10YR 6/4 and 7/4) gravelly loam, dark yellowish brown and yellowish brown (10YR 4/4 and 5/4) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common patchy faint clay films on faces of peds and in pores; common very fine and fine and few medium roots; few fine irregular pores; 15 percent pebbles and 25 percent soft schist fragments; slightly acid; gradual wavy boundary.

2Bt3—38 to 50 inches; light yellowish brown and brown (10YR 6/4 and 5/3) gravelly loam, dark yellowish brown and dark brown (10YR 4/4 and 3/3) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common patchy distinct clay films on faces of peds and in pores and common clay bridges between sand grains; common fine and medium roots; few fine irregular pores; 20 percent pebbles and 30 percent soft schist fragments; slightly acid; gradual wavy boundary.

2C—50 to 63 inches; light yellowish brown and dark brown (10YR 6/4 and 4/3) gravelly fine sandy loam, dark brown and very dark grayish brown (10YR 4/3 and 3/2) moist; massive; soft, very friable, nonsticky and nonplastic; few medium roots; many very fine irregular pores; 20 percent pebbles and 40 percent soft schist fragments; slightly acid.

The upper part of the particle-size control section is dominantly amorphous material and averages 0 to 20 percent pumice and 0 to 10 percent rock fragments. The lower part averages 12 to 18 percent clay, 10 to 35 percent hard rock fragments, and 20 to 50 percent soft rock fragments.

The E horizon has value of 5 to 8 dry and 3 to 6 moist and chroma of 1 or 2 dry or moist. It may be absent in some pedons. The horizon is moderately acid or strongly acid.

The Bs horizon has hue of 10YR, 7.5YR, or 5YR, value of 4 to 7 dry and 2 to 5 moist, and chroma of 3 to 6 dry or moist. It is fine sandy loam, sandy loam, gravelly sandy loam, or silt loam. The horizon is slightly acid to strongly acid.

The 2Bt horizon has hue of 10YR or 2.5Y, value of 5 to 7 dry and 3 to 5 moist, and chroma of 2 to 4 dry or moist. It is loam, gravelly loam, gravelly sandy loam, or gravelly fine sandy loam. The horizon is slightly acid to strongly acid.

The 2C horizon has hue of 10YR or 2.5Y, value of 3 to 7 dry and 3 to 5 moist, and chroma of 2 to 4 dry or moist. It is gravelly fine sandy loam, gravelly sandy loam, very gravelly sandy loam, very cobbly sandy loam, or very flaggy sandy loam. It averages 20 to 45 percent hard fragments and 25 to 45 percent soft fragments. The horizon is slightly acid to strongly acid.

Alnult Series

The Alnult series consists of very deep, well drained soils on mountainsides. These soils formed in colluvium derived from granitic rock mixed with volcanic ash. Slope is 30 to 90 percent. Elevation is 3,500 to 5,000 feet. The average annual precipitation is 70 to 85 inches, the average annual air temperature is 39 to 41 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Alnult very stony fine sandy loam in an area of Alnult-Reggad complex, 45 to 90 percent slopes, 1,650 feet south and 2,000 feet west of the northeast corner of sec. 25, T. 27 N., R. 13 E.

A—0 to 6 inches; dark gray (10YR 4/1) very stony fine sandy loam, black (10YR 2/1) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common fine tubular pores; 10 percent pebbles, 15 percent cobbles, and 30 percent stones; 10 percent surface stones and boulders; moderately acid; gradual smooth boundary.

Bhs1—6 to 14 inches; dark reddish brown (5YR 3/4) very stony fine sandy loam, dark reddish brown (5YR 2.5/2) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; few fine tubular pores; 10 percent pebbles, 15 percent cobbles, and 30 percent stones; slightly acid; gradual wavy boundary.

Bhs2—14 to 32 inches; dark reddish brown (5YR 3/4) very stony fine sandy loam, dark reddish brown (5YR 2.5/2) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine and medium roots; few fine tubular pores; 15 percent cobbles and 30 percent stones; slightly acid; gradual wavy boundary.

Bs—32 to 50 inches; brown (7.5YR 5/4) very gravelly fine sandy loam, dark brown (7.5YR 3/2) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few fine and medium roots; few fine tubular pores; 20 percent pebbles, 15 percent cobbles, and 10 percent stones; slightly acid; gradual wavy boundary.

C—50 to 60 inches; reddish brown (5YR 4/4) extremely gravelly fine sandy loam, dark reddish brown (5YR 3/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; 65 percent pebbles, 10 percent cobbles, and 5 percent stones; slightly acid.

The profile is moderately acid or slightly acid. The particle-size control section averages 40 to 80 rock fragments.

The A horizon has hue of 10YR or 7.5YR, value of 4 or 5 dry and 2 or 3 moist, and chroma of 1 or 2 dry or moist.

The Bhs horizon has hue of 5YR or 7.5YR, value of 3 to 5 dry and 2 to 3 moist, and chroma of 2 to 4 dry or moist. It is very stony fine sandy loam or very stony sandy loam.

The Bs horizon has hue of 5YR or 7.5YR, value of 4 to 6 dry and 3 or 4 moist, and chroma of 2 to 6 dry or moist. It is very gravelly fine sandy loam, extremely gravelly fine sandy loam, or extremely gravelly loam.

The C horizon has hue of 5YR or 7.5YR, value of 4 or 5 dry, and chroma of 4 to 6 dry and 2 to 4 moist. It is extremely gravelly fine sandy loam, extremely gravelly loam, or very gravelly fine sandy loam.

Altapeak Series

The Altapeak series consists of deep, well drained soils on broad ridgetops and mountainsides. These soils formed in volcanic ash mixed with colluvium derived from granodiorite. Slope is 3 to 90 percent. Elevation is 3,200 to 5,500 feet. The average annual precipitation is 70 to 110 inches, the average annual air temperature is 39 to 42 degrees F, and the frost-free season at 32 degrees is 50 to 90 days.

Typical pedon of Altapeak gravelly sandy loam, warm, 30 to 60 percent slopes, 2,600 feet west of the southeast corner of sec. 25, T. 25 N., R. 14 E.

Oi—4 to 3 inches; undecomposed forest litter.

Oe—3 inches to 0; partially decomposed forest litter.

E—0 to 3 inches; pinkish gray (7.5YR 7/2) loamy sand, pinkish gray (7.5YR 6/2) moist; weak fine granular structure; soft, loose, nonsticky and nonplastic; common very fine roots; common very fine and fine pores; 5 percent pebbles; very strongly acid; gradual irregular boundary tonguing into Bhs horizon.

Bhs—3 to 6 inches; brown (7.5YR 5/4) and dark brown (7.5YR 4/2) gravelly sandy loam, strong brown (7.5YR 4/6 and 5/6) and very dark gray (7.5YR 3/2) moist; moderate fine subangular blocky structure; soft, loose, nonsticky and nonplastic; common medium and few coarse roots; weakly smeary; common fine tubular pores; 5 percent pumice; 20 percent pebbles; strongly acid; gradual irregular boundary tonguing into Bs horizon.

Bs—6 to 26 inches; brown (7.5YR 5/4) very gravelly loamy sand, dark brown (7.5YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; common very fine tubular pores; 5 percent pumice; 30 percent pebbles and 10 percent cobbles; moderately acid; clear wavy boundary.

BC—26 to 35 inches; yellowish brown (10YR 5/4) very cobbly loamy sand, dark yellowish brown (10YR 4/4) moist; single grain; soft, very friable, nonsticky and nonplastic; common very fine roots; few fine and medium tubular pores; 25 percent pebbles and 25 percent cobbles; moderately acid; abrupt wavy boundary.

C—35 to 48 inches; light olive brown (2.5Y 5/4) very cobbly loamy sand, olive brown

(2.5Y 4/4) moist; single grain; soft, very friable, nonsticky and nonplastic; few fine to coarse tubular pores; 10 percent pebbles and 40 percent cobbles; moderately acid; abrupt smooth boundary.

Cr—48 to 58 inches; weathered granodiorite.

Depth to weathered bedrock is 40 to 60 inches. The particle-size control section averages 35 to 70 percent rock fragments.

The E horizon has hue of 5YR, 7.5YR, or 10YR, value of 6 or 7 dry and 4 to 6 moist, and chroma of 2 or 3 dry and 0 to 2 moist. The horizon is very strongly acid or strongly acid.

The Bhs horizon has hue of 5YR or 7.5YR, value of 4 or 5 dry and 3 to 5 moist, and chroma of 2 to 6 dry or moist. It is gravelly sandy loam, very gravelly sandy loam, or very stony loamy sand. The horizon is strongly acid to slightly acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 4 or 5 dry and 3 to 5 moist, and chroma of 3 to 6 dry and 2 to 6 moist. It is very gravelly loamy sand, very cobbly sandy loam, very cobbly loamy sand, or very stony loamy sand. The horizon is strongly acid to slightly acid.

The C horizon has hue of 2.5Y or 10YR, value of 4 to 7 moist and 5 to 7 dry, and chroma of 3 or 4 dry or moist. It is very cobbly loamy sand, extremely gravelly coarse sand, extremely cobbly sand, very gravelly loamy coarse sand, or extremely stony loamy sand. The horizon is strongly acid to slightly acid.

Anatone Series

The Anatone series consists of shallow, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from basalt or andesite mixed with loess and volcanic ash. Slope is 30 to 60 percent. Elevation is 3,600 to 4,600 feet. The average annual precipitation is 18 to 24 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 100 to 130 days.

Typical pedon of Anatone cobbly loam in an area of Anatone-Rock outcrop complex, 30 to 60 percent slopes, 700 feet west of the southeast corner of sec. 2, T. 22 N., R. 19 E.

A—0 to 4 inches; grayish brown (10YR 5/2) cobbly loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; common fine and medium interstitial pores; 25 percent pebbles and 5 percent cobbles and flagstones; 1 percent surface cobbles and flagstones; neutral; gradual wavy boundary.

Bw—4 to 11 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine roots; few fine interstitial pores, 35 percent pebbles and 5 percent cobbles; neutral; abrupt wavy boundary.

R—11 to 15 inches; unweathered andesite.

Depth to unweathered bedrock is 10 to 20 inches. The particle-size control section is 35 to 50 percent rock fragments. The profile is slightly acid or neutral.

The A horizon has hue of 10YR or 7.5YR, value of 3 to 5 dry and 2 or 3 moist, and chroma of 2 or 3 dry or moist.

The Bw horizon has hue of 10YR or 7.5YR, value of 3 to 5 dry, and chroma of 2 or 3 dry or moist. It is very gravelly loam, extremely cobbly loam, or very cobbly loam.

Andic Cryochrepts

Andic Cryochrepts consists of moderately deep to very deep, well drained soils on mountainsides and cirque basin headwalls. These soils formed in volcanic ash and colluvium. Slope is 30 to 120 percent. Elevation is 2,500 to 8,000 feet. The average annual precipitation is 40 to 150 inches, the average annual air temperature is 38 to 43 degrees F, and the frost-free season at 32 degrees is 50 to 80 days.

Reference pedon of Andic Cryochrepts, very steep, 2,000 feet west and 1,000 feet north of the southeast corner of sec. 2, T. 31 N., R. 15 E.

O—3 inches to 0; undecomposed forest litter.

A—0 to 4 inches; yellowish brown (10YR 5/4) extremely stony loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, friable, nonsticky and nonplastic; weakly smeary; many very fine and fine roots; common fine tubular pores; 30 percent pebbles and 5 percent cobbles; 40 percent surface stones; moderately acid; clear wavy boundary.

Bw—4 to 10 inches; grayish brown (10YR 5/2) very cobbly loam, dark yellowish brown (10YR 3/4) moist; weak fine subangular blocky structure; soft, friable, nonsticky and nonplastic; weakly smeary; many very fine and fine roots; few fine tubular pores; 20 percent pebbles and 20 percent cobbles; moderately acid; clear wavy boundary.

C—10 to 60 inches; dark yellowish brown (10YR 4/4) very cobbly loam, dark yellowish brown (10YR 3/6) moist; massive; soft, very friable, nonsticky and nonplastic; weakly smeary; common very fine and fine roots; few fine tubular pores; 15 percent pebbles and 30 percent cobbles; slightly acid.

The profile is moderately acid or slightly acid. Ten to fifty percent of the surface is covered with stones. The content of rock fragments is 10 to 50 percent. Depth to unweathered bedrock is 20 to 60 inches or more.

The A horizon has chroma of 2 to 4 dry and 2 or 3 moist. It is very stony loam, extremely stony loam, or very stony fine sandy loam.

The Bw horizon has hue of 7.5YR or 10YR, value of 3 or 4 moist, and chroma of 2 or 3 dry. It is very cobbly loam, very gravelly fine sandy loam, or gravelly fine sandy loam.

The C horizon has hue of 7.5YR or 10YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 2 to 4 dry and 4 to 7 moist. It is very cobbly loam, very gravelly loam, very gravelly fine sandy loam, gravelly loam, or gravelly fine sandy loam.

Andic Cryumbrepts

Andic Cryumbrepts consists of moderately deep to very deep, well drained soils on mountainsides. These soils formed in volcanic ash and loess mixed with colluvium and residuum derived from metamorphic and igneous rock. Slope is 3 to 90 percent. Elevation is 3,500 to 8,250 feet. The average annual precipitation is 35 to 150 inches, the average annual air temperature is 38 to 42 degrees F, and the frost-free season at 32 degrees is 50 to 90 days.

Reference pedon of Andic Cryumbrepts, steep, 2,450 feet west and 100 feet north of the southeast corner of sec. 13, T. 25 N., R. 16 E.

A1—0 to 8 inches; dark grayish brown (10YR 4/2) stony sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; few very fine tubular pores; 15 percent pebbles and 5 percent surface stones; slightly acid; clear wavy boundary.

A2—8 to 13 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; few very fine tubular pores; 15 percent pebbles; moderately acid; clear wavy boundary.

Bw—13 to 19 inches; dark brown (10YR 4/3) gravelly sandy loam, dark brown (7.5YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; few very fine tubular pores; 20 percent pebbles and 5 percent cobbles; slightly acid; clear wavy boundary.

BC—19 to 24 inches; brown (10YR 5/3) very gravelly sandy loam, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; common fine and few very fine and medium roots; common very fine tubular pores; 25 percent pebbles and 10 percent cobbles; slightly acid; gradual wavy boundary.

C1—24 to 37 inches; grayish brown (10YR 5/2) very gravelly sandy loam, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; common very fine tubular pores; 35 percent pebbles and 10 percent cobbles; slightly acid; clear wavy boundary.

C2—37 to 60 inches; grayish brown (2.5Y 5/2) extremely gravelly sandy loam, very dark grayish brown (2.5Y 3/2) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine tubular pores; 70 percent pebbles, 15 percent cobbles, and 5 percent stones; slightly acid.

The content of rock fragments is 15 to 90 percent, increasing with depth. Some pedons have a low amount of pumice. Depth to unweathered bedrock is 20 to 60 inches or more.

The A horizon has hue of 10YR or 2.5Y and value of 3 to 5 dry and 2 or 3 moist. It is sandy loam, very stony sandy loam, stony sandy loam, or extremely stony sandy loam. The horizon is moderately acid or slightly acid.

The Bw horizon has hue of 7.5YR, 2.5Y, or 10YR, value of 4 to 6 dry and 2 to 5 moist, and chroma of 3 or 4 dry and 2 to 4 moist. It is gravelly sandy loam, gravelly loam, gravelly fine sandy loam, very gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, or very stony fine sandy loam. The horizon is moderately acid or slightly acid.

The C horizon has hue of 2.5Y, 7.5YR, or 10YR, value of 5 to 7 dry and 3 to 5 moist, and chroma of 2 to 6 dry and 2 to 4 moist. It is fine sandy loam, sandy loam, loamy sand, or coarse sandy loam. The content of rock fragments is 15 to 90 percent. The horizon is slightly acid or neutral.

Andic Haplumbrepts

Andic Haplumbrepts consists of moderately deep, well drained soils on mountainsides. These soils formed in colluvium derived from metamorphic and igneous rock mixed with volcanic ash and loess. Slope is 45 to 90 percent. Elevation is 2,200 to 3,600 feet. The average annual precipitation is 70 to 95 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Reference pedon of Andic Haplumbrepts in an area of Andic Haplumbrepts-Rock outcrop complex, very steep, 1,500 feet north and 300 feet east of the southwest corner of sec. 1, T. 28 N., R. 15 E.

Oi—2 inches to 1 inch; undecomposed forest litter.

Oe—1 inch to 0; partially decomposed forest litter.

A—0 to 8 inches; dark grayish brown (10YR 4/2) stony fine sandy loam, very dark brown (10YR 2/2) moist; weak coarse granular structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; few very fine tubular pores; 10 percent pebbles, 5 percent cobbles, and 10 percent stones; some surface stones; slightly acid; clear wavy boundary.

Bw1—8 to 16 inches; yellowish brown (10YR 5/4) very gravelly fine sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common medium roots; few very fine tubular pores; 15 percent pebbles, 10 percent cobbles, and 10 percent stones; slightly acid; gradual wavy boundary.

Bw2—16 to 29 inches; yellowish brown (10YR 5/4) very gravelly fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common medium roots; few very fine tubular pores; 20 percent pebbles, 10 percent cobbles, and 10 percent stones; slightly acid; abrupt smooth boundary.

R—29 to 33 inches; unweathered gneiss.

The profile is moderately acid or slightly acid. Depth to unweathered bedrock is 20 to 40 inches. The content of rock fragments is 15 to 50 percent.

The A horizon has value of 4 or 5 dry and 2 or 3 moist and chroma of 2 or 3 dry. It is stony fine sandy loam, stony sandy loam, very stony fine sandy loam, or very stony sandy loam.

The Bw horizon has value of 3 or 4 moist and chroma of 3 or 4 moist or dry. It is very gravelly fine sandy loam, very cobbly fine sandy loam, or gravelly fine sandy loam.

Angle Series

The Angle series consists of very deep, well drained soils on terrace escarpments. These soils formed in glacial outwash with a mixture of loess and volcanic ash in the upper part. Slope is 60 to 90 percent. Elevation is 2,000 to 3,500 feet. The average annual precipitation is 25 to 35 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Angle stony loamy sand, 60 to 90 percent slopes, 500 feet north and 1,500 feet west of the southeast corner of sec. 26, T. 28 N., R. 19 E.

Oe—1 inch to 0; undecomposed needles, grass, leaves, and twigs.

A—0 to 2 inches; light gray (10YR 7/2) stony loamy sand, dark brown (10YR 3/3) moist; massive; soft, very friable, nonsticky and nonplastic; many fine and medium roots; many fine and medium tubular pores; slightly acid; 1 to 3 percent surface stones; clear wavy boundary.

E—2 to 7 inches; light gray (10YR 7/2) loamy sand, dark brown (10YR 4/3) moist; massive; soft, friable, nonsticky and nonplastic; many medium and coarse roots; many fine and medium tubular pores; moderately acid; gradual wavy boundary.

E and Bt1—7 to 23 inches; very pale brown (10YR 7/4) cobbly loamy sand, yellowish brown (10YR 5/6) moist; massive; slightly hard, friable, nonsticky and nonplastic; few medium and coarse roots; many fine and medium tubular pores; 25 percent cobbles; two discontinuous as much as 1-inch-thick pink (7.5YR 7/4) loamy sand lamellae, light brown (7.5YR 6/4) moist; moderately acid; gradual wavy boundary.

E and Bt2—23 to 42 inches; very pale brown (10YR 8/4) loamy sand, light yellowish brown (10YR 6/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few coarse roots; many fine and medium pores and few coarse tubular pores; 10 percent stones; three discontinuous as much as 2-inch-thick light yellowish brown (10YR 6/4) coarse sandy loam lamellae, yellowish brown (10YR 5/4) moist; moderately acid; gradual wavy boundary.

C—42 to 60 inches; multicolored medium sand; single grain; loose; moderately acid.

The horizon is slightly acid or moderately acid. The particle-size control section is 5 to 35 percent rock fragments.

The A horizon has value of 3 or 4 moist and 5 to 7 dry and chroma of 2 to 4 moist or dry.

The E horizon has value of 4 or 5 moist and 5 to 7 dry and chroma of 3 or 4 moist and 2 to 4 dry. It is sandy loam or loamy sand and may be gravelly, stony, or cobbly. If the texture of the E horizon is sandy loam, the horizon does not extend into the control section.

The E and Bt horizon has value of 4 to 6 moist and 5 to 8 dry and chroma of 3 to 6 moist and 2 to 4 dry. It is massive or single grain. It is loamy sand and may be gravelly, stony, or cobbly. The Bt part consists of discontinuous 0- to 2-inch-thick pink (7.5YR 7/4) or light yellowish brown (10YR 6/4) loamy sand or coarse sandy loam lamellae.

Aquic Cryumbrepts

Aquic Cryumbrepts consists of very deep, somewhat poorly drained soils on flood plains and in depressions on mountains. These soils formed in alluvium. Slope is 0 to 8 percent. Elevation is 2,000 to 5,800 feet. The average annual precipitation is 40 to 120 inches, the average annual air temperature is 39 to 41 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Reference pedon of Aquic Cryumbrepts, nearly level to gently sloping, 1,900 feet west and 400 feet south of the northeast corner of sec. 13, T. 28 N., R. 15 E.

A1—0 to 4 inches; grayish brown (10YR 5/2) loamy fine sand, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine roots; few very fine tubular pores; slightly acid; abrupt smooth boundary.

A2—4 to 8 inches; brown (10YR 5/3) very fine sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine roots; common very fine and fine tubular pores; slightly acid; abrupt smooth boundary.

C1—8 to 14 inches; dark grayish brown (10YR 4/2) loamy fine sand, black (10YR 2/1) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; common very fine and fine tubular pores; neutral; abrupt smooth boundary.

C2—14 to 29 inches; grayish brown (10YR 5/2) medium sand, very dark grayish brown (10YR 3/2) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; neutral; abrupt smooth boundary.

C3—29 to 47 inches; gray (10YR 6/1), stratified gravelly loamy fine sand and medium sand, dark gray (10YR 4/1) moist; common distinct coarse mottles that are yellowish brown (10YR 5/6) dry and dark yellowish brown (10YR 3/6) moist; single grain; soft, very friable, nonsticky and nonplastic; few very fine roots; 15 percent pebbles; neutral; abrupt smooth boundary.

C4—47 to 60 inches; multicolored, mottled extremely gravelly sand and coarse sand; single grain; loose, nonsticky and nonplastic; 70 percent pebbles and 5 percent cobbles; neutral.

The content of rock fragments is 0 to 75 percent, increasing with depth. An apparent water table is present in January through December, and it is at its highest depth (1 foot above the surface to 0.3 foot below the surface) in January through April. Brief periods of ponding occur in January through April. Long, frequent periods of flooding occur in November through April.

The A horizon has value of 2 or 3 moist and chroma of 1 or 2 dry or moist. It is loamy fine sand, very fine sandy loam, fine sandy loam, or silt loam. The horizon is strongly acid to slightly acid.

The C horizon has hue of 10YR, 2.5Y, or 5YR, value of 4 to 6 dry and 2 to 6 moist, and chroma of 1 to 3 dry and 1 to 6 moist. It is loamy fine sand, loamy sand, sandy loam, coarse sand, sand, or silt loam. The content of rock fragments is 5 to 75 percent. The horizon is slightly acid or neutral.

Ardening Series

The Ardening series consists of deep, well drained soils on mountainsides. These soils formed in residuum and colluvium weathered mainly from schist mixed with loess. Slope is 30 to 60 percent. Elevation is 2,600 to 4,500 feet. The average annual precipitation is 20 to 28 inches, the average annual air temperature is 45 to 48 degrees F, and the frost-free season at 32 degrees is 100 to 130 days.

Typical pedon of Ardening stony loam, 30 to 60 percent slopes, 2,100 feet south and 300 feet west of the northeast corner of sec. 21, T. 26 N., R. 19 E.

A1—0 to 6 inches; grayish brown (10YR 5/2) stony loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common fine and medium interstitial and tubular pores; 15 percent pebbles, 5 percent cobbles, and 5 percent soft pebbles;
1 to 3 percent surface stones; neutral; clear wavy boundary.
A2—6 to 18 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; many fine and medium roots; common fine and medium interstitial and tubular pores; 15 percent pebbles, 10 percent cobbles, and 15 percent soft pebbles; neutral; gradual wavy boundary.
Bw—18 to 26 inches; brown (10YR 5/3) cobbly loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; common fine roots; common fine and medium interstitial pores; 15 percent pebbles, 15 percent cobbles, and 20 percent soft pebbles; neutral; gradual wavy boundary.
C—26 to 42 inches; pale brown (10YR 6/3) cobbly loam, dark brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and slightly plastic; few fine roots; common medium and coarse tubular and spherical pores; 15 percent pebbles, 15 percent cobbles, and 25 percent soft pebbles; neutral; abrupt wavy boundary.
Cr—42 to 52 inches; weathered schist.

Depth to weathered bedrock is 40 to 60 inches. The profile is slightly acid or neutral.

The A horizon has value of 2 or 3 moist and chroma of 2 or 3 dry or moist. It is stony loam, gravelly loam, or cobbly loam. It is 10 to 20 percent pebbles, 0 to 10 percent cobbles, 0 to 10 percent stones, and 0 to 15 percent soft rock fragments.

The Bw horizon has value of 5 or 6 dry and 3 or 4 moist and chroma of 2 or 3 dry. It is sandy loam, fine sandy loam, or loam and is gravelly or cobbly. It averages 15 to 35 percent rock fragments, including 15 to 25 percent pebbles, 0 to 15 percent cobbles, 0 to 3 percent stones, and 10 to 20 percent soft rock fragments.

The C horizon has value of 5 or 6 dry and chroma of 3 or 4 dry. It is loam, fine sandy loam, or sandy loam and is gravelly or cobbly. It averages 20 to 35 percent rock fragments, including 15 to 30 percent pebbles, 5 to 15 percent cobbles, 0 to 3 percent stones, and 10 to 25 percent soft rock fragments.

Ardenmont Series

The Ardenmont series consists of deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from schist mixed with volcanic ash and loess. Slope is 8 to 90 percent. Elevation is 2,200 to 4,700 feet. The average annual precipitation is 18 to 24 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 80 to 120 days.

Typical pedon of Ardenmont coarse sandy loam, 30 to 60 percent slopes, 1,000 feet south and 800 feet east of the northwest corner of sec. 34, T. 25 N., R. 20 E.

Oi—3 inches to 0; undecomposed and partially decomposed forest litter.
A—0 to 4 inches; light brownish gray (10YR 6/2) coarse sandy loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium and common coarse

roots; many fine irregular pores; 10 percent pebbles; neutral; clear smooth boundary.

AB—4 to 9 inches; pale brown (10YR 6/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium and common coarse roots; common fine irregular pores; 20 percent pebbles; neutral; gradual wavy boundary.

Bw—9 to 18 inches; pale brown (10YR 6/3) gravelly coarse sandy loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium and few coarse roots; common fine irregular pores; 20 percent pebbles; neutral; clear wavy boundary.

Bt1—18 to 23 inches; pale brown (10YR 6/3) coarse sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine and medium and few coarse roots; common fine irregular pores; few patchy faint clay films on faces of peds; 10 percent pebbles and 20 percent soft pebbles; slightly alkaline; clear wavy boundary.

Bt2—23 to 40 inches; light yellowish brown (10YR 6/4) gravelly loamy coarse sand, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine and medium roots; many fine irregular pores and common fine tubular pores; few patchy faint clay films on faces of peds; 20 percent pebbles, 40 percent soft pebbles, and 5 percent soft cobbles; slightly alkaline; gradual wavy boundary.

Bt3—40 to 51 inches; light yellowish brown (10YR 6/4) gravelly loamy coarse sand, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; very hard, firm, slightly sticky and slightly plastic; common fine and medium roots; many fine irregular and tubular pores; common patchy distinct clay films on faces of peds; 20 percent pebbles, 45 percent soft pebbles, and 10 percent soft cobbles; slightly alkaline; abrupt irregular boundary.

Cr—51 to 61 inches; weathered schist.

Depth to weathered bedrock is 40 to 60 inches. The solum is 24 to 40 inches thick. These soils usually are moist, but they are dry in all parts between depths of 8 and 24 inches for 60 to 75 consecutive days. The particle-size control section is 15 to 50 percent weathered schist.

The A horizon has value of 5 or 6 dry and chroma of 2 or 3 dry or moist. It is slightly acid or neutral.

The AB horizon has value of 3 or 4 moist and chroma of 3 or 4 moist or dry. It is fine sandy loam, sandy loam, gravelly coarse sandy loam, or gravelly sandy loam. It is 5 to 20 percent pebbles and 5 to 25 percent soft pebbles. The horizon is slightly acid or neutral.

The Bw and Bt horizons have value of 5 or 6 dry and chroma of 2 to 4 moist or dry. They have weak or moderate subangular blocky structure. They are loamy coarse sand, coarse sandy loam, gravelly loamy coarse sand, fine sandy loam, sandy loam, gravelly sandy loam, or gravelly fine sandy loam. The horizons are 5 to 35 percent pebbles and 5 to 50 percent soft fragments. They are slightly acid to slightly alkaline.

Ardenvoir Series

The Ardenvoir series consists of deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from gneiss and schist mixed with loess and volcanic ash in the upper part. Slope is 30 to 90 percent. Elevation is 2,200 to 4,700 feet. The average annual precipitation is 20 to 24 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Ardenvoir stony fine sandy loam, 60 to 90 percent slopes, 1,100 feet west and 500 feet south of the center of sec. 3, T. 24 N., R. 20 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 6 inches; light brownish gray (10YR 6/2) stony fine sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; many fine tubular pores; 10 percent pebbles, 5 percent cobbles, and 2 percent stones; 1 to 3 percent surface stones; neutral; gradual smooth boundary.

Bw—6 to 12 inches; pale brown (10YR 6/3) very cobbly sandy loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; many fine, medium, and coarse roots; common fine tubular pores; 20 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

BC—12 to 26 inches; light yellowish brown (10YR 6/4) extremely gravelly coarse sandy loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; common medium and coarse roots; common fine tubular pores; 40 percent pebbles, 20 percent cobbles, and 5 percent stones; slightly acid; gradual wavy boundary.

C—26 to 56 inches; light yellowish brown (10YR 6/4) extremely gravelly coarse sandy loam, dark grayish brown (10YR 4/2) moist; massive; soft, friable, nonsticky and nonplastic; few medium and coarse roots; common fine tubular pores; 40 percent pebbles, 20 percent cobbles, and 5 percent stones; slightly acid; abrupt wavy boundary.

R—56 to 60 inches; fractured unweathered gneiss.

Depth to fractured unweathered bedrock is 40 to 60 inches. The solum is 24 to 40 inches thick. The particle-size control section averages 40 to 70 percent rock fragments.

The A horizon has value of 5 or 6 dry and chroma of 2 or 3 dry or moist. It is 15 to 30 percent hard rock fragments and 5 to 15 percent soft rock fragments. It is stony fine sandy loam. The horizon is slightly acid or neutral.

The Bw and BC horizons have value of 3 to 5 moist and chroma of 2 to 4 moist or dry. They are very cobbly sandy loam, extremely gravelly coarse sandy loam, very gravelly fine sandy loam, or extremely gravelly sandy loam. They are 40 to 70 percent hard rock fragments and 5 to 15 percent soft rock fragments. The horizons are neutral to moderately acid.

The C horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 2 to 4 moist or dry. It is extremely gravelly coarse sandy loam or extremely gravelly sandy loam. The horizon is 65 to 75 percent hard rock fragments and 5 to 15 percent soft rock fragments. It is neutral to moderately acid.

Azwell Series

The Azwell series consists of moderately deep, well drained soils on backslopes of mountains. These soils formed in residuum and colluvium derived from gneiss and schist mixed with volcanic ash. Slope is 30 to 90 percent. Elevation is 4,000 to 6,500 feet. The average annual precipitation is 30 to 50 inches, the average annual air temperature is 40 to 42 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Azwell stony loam in an area of Azwell-Rock outcrop complex, 30 to 60 percent slopes, 1,800 feet east and 1,800 feet north of the southwest corner of sec. 5, T. 27 N., R. 19 E.

Oi—0.25 inch to 0; undecomposed forest litter.

A—0 to 4 inches; dark grayish brown (10YR 4/2) stony loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many fine and medium roots; many fine and medium tubular pores; 15 percent pebbles; 1 to 3 percent surface stones; strongly acid; diffuse wavy boundary.

Bw—4 to 15 inches; dark grayish brown (10YR 4/2) cobbly loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; common fine and medium and few coarse roots; many fine and medium and few coarse tubular pores; 15 percent pebbles and 20 percent cobbles; moderately acid; gradual wavy boundary.

C—15 to 26 inches; dark grayish brown (10YR 4/2) very stony fine sandy loam, dark yellowish brown (10YR 3/4) moist; massive; soft, friable, nonsticky and nonplastic; few fine and medium roots; many fine and medium tubular pores; 10 percent pebbles, 10 percent cobbles, and 30 percent stones; moderately acid; abrupt wavy boundary.

R—26 to 30 inches; fractured unweathered gneiss.

The particle-size control section averages 35 to 60 percent rock fragments. The upper part of the control section has an admixture of volcanic ash that is less than 60 percent pyroclastic material. Depth to unweathered bedrock is 20 to 40 inches. The horizon is slightly acid to strongly acid.

The A horizon has value of 4 to 6 dry and 2 or 3 moist, and it has chroma of 1 to 3 dry or moist.

The Bw horizon has value of 4 to 6 dry and 3 to 5 moist, and it has chroma of 2 to 4 dry and 2 or 3 moist. It is loam or fine sandy loam and is cobbly, very gravelly, very cobbly, stony, or very stony.

The C horizon has value of 4 to 6 dry and 3 to 5 moist, and it has chroma of 2 to 4 dry and 3 to 6 moist. It is loam, fine sandy loam, or sandy loam and is very stony, extremely stony, or very cobbly.

Bagmont Series

The Bagmont series consists of moderately deep, well drained soils on mountainsides. These soils formed in loess and volcanic ash mixed with colluvium and residuum derived from schist and gneiss. Slope is 40 to 90 percent. Elevation is 4,800 to 5,800 feet. The average annual precipitation is 25 to 30 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 80 to 110 days.

Typical pedon of Bagmont gravelly loam, 40 to 90 percent slopes, 2,640 feet east and 200 feet north of the southwest corner of sec. 22, T. 25 N., R. 19 E.

A1—0 to 4 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common fine tubular pores; 20 percent pebbles and 5 percent cobbles; neutral; gradual smooth boundary.

A2—4 to 12 inches; dark grayish brown (10YR 4/2) very gravelly fine sandy loam, dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common fine tubular pores; 30 percent pebbles and 10 percent cobbles; neutral; gradual wavy boundary.

Bw—12 to 22 inches; dark brown (10YR 4/3) very gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine and medium roots;

common fine and medium tubular pores; 30 percent pebbles, 20 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

C—22 to 38 inches; yellowish brown (10YR 5/4) extremely gravelly sandy loam, dark brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; 40 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral; abrupt wavy boundary.

Cr—38 to 48 inches; fractured weathered schist.

The particle-size control section averages 40 to 70 percent rock fragments. Depth to weathered bedrock is 20 to 40 inches.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist.

The Bw horizon has value of 4 or 5 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry and 2 or 3 moist. It is very gravelly fine sandy loam, very cobbly fine sandy loam, or very cobbly sandy loam.

The C horizon has value of 4 to 6 dry and 4 or 5 moist, and it has chroma of 2 to 4 dry and 2 or 3 moist. It is extremely gravelly sandy loam, very cobbly sandy loam, or very gravelly sandy loam.

Bigcreek Series

The Bigcreek series consists of very deep, well drained soils on terraces. These soils formed in volcanic ash and pumice over glacial outwash. Slope is 0 to 8 percent. Elevation is 1,800 to 2,500 feet. The average annual precipitation is 30 to 45 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 75 to 110 days.

Typical pedon of Bigcreek cindery sandy loam, 0 to 8 percent slopes, 1,900 feet west and 2,100 feet south of the northeast corner of sec. 13, T. 27 N., R. 17 E.

Oi—0.5 inch to 0; undecomposed forest litter with thin layers of light gray (10YR 7/1) cindery loamy sand, dark grayish brown (10YR 4/2) moist; single grain; loose, nonsticky and nonplastic; few fine roots; 15 percent pumice; slightly acid; broken smooth boundary.

Bw1—0 to 5 inches; pale brown (10YR 6/3) cindery sandy loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine and fine tubular and interstitial pores; 15 percent pumice; neutral; clear smooth boundary.

Bw2—5 to 16 inches; light yellowish brown (10YR 6/4) cindery sandy loam, strong brown (7.5YR 4/6) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots; many very fine and fine tubular and interstitial pores; 20 percent pumice; neutral; clear wavy boundary.

2BC—16 to 30 inches; white (10YR 8/2) and yellow (10YR 7/6) cinders, light gray (10YR 7/2) and brownish yellow (10YR 6/6) moist; single grain; loose; few fine roots; 95 to 100 percent pumice; neutral; abrupt smooth boundary.

3C1—30 to 33 inches; white (10YR 8/2), yellow (10YR 7/6), and very dark gray (10YR 3/1) coarse sand, light gray (10YR 7/2), brownish yellow (10YR 6/6), and black (10YR 2/1) moist; single grain; loose; few fine roots; 10 percent pumice; neutral; abrupt smooth boundary.

4C2—33 to 38 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; common fine and few medium and coarse roots; common fine tubular and interstitial pores; 20 percent pebbles and 5 percent cobbles; 5 percent pumice; slightly acid; clear wavy boundary.

5C3—38 to 60 inches; multicolored extremely gravelly sand; single grain; loose; 60 percent pebbles and 10 percent cobbles; slightly acid.

The upper 16 inches of the particle-size control section averages 30 to 60 percent volcanic ash, and the lower part to a depth of 30 inches averages 85 to 100 percent pumice. Depth to the pumiceous 2BC horizon is 12 to 20 inches, and depth to the sandy-skeletal 5C3 horizon is 30 to 40 inches.

The E horizon, where present, has value of 6 to 8 dry and 3 to 5 moist, and it has chroma of 1 or 2 dry or moist. It is cindery loamy sand or cindery sandy loam. It is slightly acid or neutral.

The Bw horizon has hue of 10YR or 7.5YR, value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 2 to 6 dry or moist. It is cindery sandy loam or cindery fine sandy loam. It is slightly acid or neutral.

The 2BC horizon has value of 6 to 8 dry and 6 or 7 moist, and it has chroma of 2 to 6 dry or moist. It is cinders.

The 3C1 horizon has value of 3 to 8 dry and 2 to 7 moist, and it has chroma of 1 to 6 dry or moist. It is sand or coarse sand. It is slightly acid or neutral.

The 4C2 horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry or moist. It is gravelly sandy loam or gravelly fine sandy loam. It is slightly acid or neutral.

The 5C3 horizon is extremely gravelly or extremely cobbly sand. It is slightly acid or neutral.

Billyridge Series

The Billyridge series consists of very deep, well drained soils on alluvial fans. These soils formed in alluvium. Slope is 0 to 25 percent. Elevation is 1,100 to 1,700 feet. The average annual precipitation is 18 to 24 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 105 to 145 days.

Typical pedon of Billyridge gravelly sandy loam, 0 to 8 percent slopes, 2,200 feet north and 1,200 feet east of the southwest corner of sec. 29, T. 25 N., R. 18 E.

Ap—0 to 6 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark grayish brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; few fine tubular and interstitial pores; 15 percent pebbles and 5 percent cobbles; neutral; gradual smooth boundary.

A—6 to 16 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark grayish brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; common fine tubular and interstitial pores; 15 percent pebbles and 10 percent cobbles; neutral; clear wavy boundary.

Bw1—16 to 30 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 4/3) moist; weak medium prismatic structure; soft, friable, nonsticky and nonplastic; common fine roots; common medium tubular and interstitial pores; 20 percent pebbles and 5 percent cobbles; neutral; gradual wavy boundary.

Bw2—30 to 40 inches; pale brown (10YR 6/3) gravelly sandy loam, dark brown (10YR 4/3) moist; weak medium prismatic structure; slightly hard, friable, nonsticky and nonplastic; common fine roots; common medium tubular and interstitial pores; 20 percent pebbles and 5 percent cobbles; neutral; clear wavy boundary.

C—40 to 60 inches; pale brown (10YR 6/3) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; common fine tubular and spherical pores; 20 percent pebbles, 10 percent cobbles, and 5 percent stones; neutral.

The particle-size control section is 5 to 25 percent rock fragments. The solum is 30 to 40 inches thick.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist.

The Bw horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist. It is gravelly sandy loam or fine sandy loam and is 5 to 25 percent rock fragments.

The C horizon has hue of 2.5Y or 10YR, value of 5 to 7 dry and 3 to 5 moist, and chroma of 2 to 4 dry or moist. It is sandy loam, gravelly sandy loam, cobbly sandy loam, or loamy sand and is 10 to 35 percent rock fragments.

Bisping Series

The Bisping series consists of very deep, well drained soils on broad ridges and mountainsides. These soils formed in volcanic ash and pumice over residuum and colluvium derived from granodiorite or rhyolite. Slope is 3 to 60 percent. Elevation is 2,200 to 3,500 feet. The average annual precipitation is 18 to 24 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 130 to 160 days.

Typical pedon of Bisping fine sandy loam, 3 to 15 percent slopes, 700 feet west and 1,800 feet north of the southeast corner of sec. 25, T. 27 N., R. 20 E.

Oi—1 inch to 0; undecomposed forest litter.

A1—0 to 4 inches; grayish brown (10YR 5/2) fine sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and common medium roots; few very fine pores; 10 percent pumice; neutral; clear smooth boundary.

A2—4 to 10 inches; brown (10YR 5/3) cindery fine sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; few very fine pores; 15 percent pumice; neutral; clear smooth boundary.

Bw—10 to 19 inches; pale brown (10YR 6/3) cindery fine sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common medium and few fine and coarse roots; few very fine tubular pores; 25 percent pumice; neutral; gradual wavy boundary.

C1—19 to 30 inches; pale brown (10YR 6/3) cindery fine sandy loam, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; few fine and medium roots; common very fine tubular pores; 30 percent pumice; neutral; clear wavy boundary.

2C2—30 to 38 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine and medium roots; common very fine tubular pores; 5 percent pumice; neutral; clear wavy boundary.

2C3—38 to 60 inches; brownish yellow (10YR 6/6) loam, dark yellowish brown (10YR 4/4) moist; slightly hard, friable, slightly sticky and slightly plastic; few medium roots; few very fine tubular pores; trace of pebbles and cinders; slightly alkaline.

The upper part of the particle-size control section is estimated to be more than 60 percent pyroclastic material, and it averages 15 to 35 percent pumice. The lower part is 5 to 30 percent rock fragments and 12 to 18 percent clay. Depth to the loamy 2C horizon is 27 to 40 inches.

The A horizon has value of 2 or 3 moist and chroma of 2 or 3 moist or dry. It is neutral or slightly acid.

The Bw and C1 horizons have value of 5 to 7 dry and 3 or 4 moist, and they have chroma of 2 to 4 dry or moist. They are cindery fine sandy loam or cindery sandy loam. They are slightly acid or neutral.

The 2C horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 3 to 6 dry or moist. It is neutral or slightly alkaline.

Bjork Series

The Bjork series consists of moderately deep, well drained soils on side slopes and ridgetops of foothills and mountains. These soils formed in loess mixed with residuum and colluvium derived from sandstone, schist, or conglomerate. Slope is 25 to 75 percent. Elevation is 1,250 to 3,600 feet. The average annual precipitation is 9 to 14 inches, the average annual air temperature is 48 to 50 degrees F, and the frost-free season at 32 degrees is 165 to 185 days.

Typical pedon of Bjork loam, 30 to 65 percent slopes, 1,500 feet west and 150 feet north of the southeast corner of sec. 32, T. 24 N., R. 20 E.

A—0 to 10 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; many fine roots; few fine tubular pores; 5 percent pebbles; neutral; abrupt smooth boundary.

Bt1—10 to 20 inches; yellowish brown (10YR 5/4) clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, very firm, moderately sticky and moderately plastic; common fine roots; many fine tubular pores; few faint clay films on faces of peds; 10 percent pebbles; slightly alkaline; clear wavy boundary.

Bt2—20 to 24 inches; yellowish brown (10YR 5/4) clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common fine roots; many fine tubular pores; few faint clay films on faces of peds; 10 percent pebbles; slightly alkaline; abrupt wavy boundary.

2Cr—24 to 34 inches; weathered schist.

The profile is neutral or slightly alkaline. The particle-size control section averages 25 to 35 percent clay. Depth to weathered bedrock is 20 to 40 inches.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist. It is loam or stony loam.

The Bt horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 3 or 4 dry or moist. It is clay loam, silt loam, or sandy clay loam.

Blag Series

The Blag series consists of shallow, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from sandstone. Slope is 30 to 80 percent. Elevation is 1,500 to 4,000 feet. The average annual precipitation is 18 to 28 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 100 to 140 days.

Typical pedon of Blag gravelly sandy loam in an area of Blag-Rock outcrop complex, 30 to 80 percent slopes, 1,650 feet north and 650 feet west of the southeast corner of sec. 36, T. 25 N., R. 17 E.

A—0 to 6 inches; light brownish gray (10YR 6/2) gravelly sandy loam, dark brown (10YR 4/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; few fine tubular pores; 15 percent pebbles; neutral; gradual wavy boundary.

Bw—6 to 16 inches; pale brown (10YR 6/3) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine roots; common fine tubular pores; 20 percent pebbles; neutral; abrupt wavy boundary.
R—16 to 20 inches; unweathered sandstone.

Depth to unweathered bedrock is 10 to 20 inches. Some pedons have an O horizon.

The A horizon has value of 3 or 4 moist and chroma of 2 or 3 dry.

The Bw horizon has value of 4 or 5 moist and chroma of 3 or 4 dry. It is gravelly sandy loam or sandy loam and is 5 to 20 percent rock fragments.

Blewett Series

The Blewett series consists of shallow, well drained soils on mountainsides that generally have a southerly aspect. These soils formed in residuum and colluvium derived from sandstone mixed with volcanic ash and loess. Slope is 30 to 60 percent. Elevation is 3,600 to 5,800 feet. The average annual precipitation is 22 to 40 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 130 days.

Typical pedon of Blewett very gravelly sandy loam in an area of Blewett-Rock outcrop complex, 30 to 60 percent slopes, 2,200 feet south and 2,000 feet west of the northeast corner of sec. 26, T. 22 N., R. 17 E.

Oi—0.5 inch to 0; undecomposed forest litter.
A—0 to 3 inches; brown (10YR 5/3) very gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; common medium tubular pores; 25 percent pebbles, 10 percent cobbles, and 5 percent soft pebbles; slightly acid; clear smooth boundary.
Bw—3 to 10 inches; yellowish brown (10YR 5/4) extremely gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine roots; few fine tubular pores; 50 percent pebbles, 15 percent cobbles, and 15 percent soft pebbles; slightly acid; clear wavy boundary.
R—10 to 14 inches; unweathered sandstone.

The particle-size control section averages 35 to 80 percent rock fragments and 5 to 20 percent weathered sandstone fragments. Depth to unweathered bedrock is 10 to 20 inches. The profile is slightly acid or neutral.

The A horizon has value of 4 or 5 dry and chroma of 2 or 3 dry or moist.

The Bw horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 to 5 dry or moist. It is extremely gravelly sandy loam, very gravelly loam, or very gravelly sandy loam.

Borland Series

The Borland series consists of shallow, well drained soils on mountains. These soils formed in residuum and colluvium derived from sandstone mixed with loess in the upper part. Slope is 30 to 90 percent. Elevation is 1,000 to 3,800 feet. The average annual precipitation is 14 to 18 inches, the average annual air temperature is 47 to 50 degrees F, and the frost-free season at 32 degrees is 130 to 165 days.

Typical pedon of Borland loam, 30 to 60 percent slopes; 500 feet west and 250 feet north of the center of sec. 30, T. 24 N., R. 19 E.

A1—0 to 3 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; common fine and very fine interstitial pores; few hard sandstone pebbles; slightly alkaline; gradual wavy boundary.

A2—3 to 6 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, friable, nonsticky and slightly plastic; many fine and very fine roots; few very fine interstitial pores; few hard sandstone pebbles, slightly alkaline; gradual wavy boundary.

Bt—6 to 11 inches; yellowish brown (10YR 5/4) clay loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common fine and very fine roots; common very fine and fine interstitial pores; few hard sandstone pebbles; slightly alkaline; abrupt wavy boundary.

R—11 to 15 inches; unweathered sandstone.

Depth to unweathered bedrock is 10 to 20 inches. The profile is 0 to 5 percent rock fragments.

The A horizon has value of 4 or 5 dry and chroma of 2 or 3 dry or moist. It is neutral or slightly alkaline.

The Bt horizon has value of 4 or 5 moist and chroma of 3 or 4 dry or moist. It is clay loam, loam, or sandy clay loam. It is neutral or slightly alkaline.

Brief Series

The Brief series consists of very deep, well drained soils on alluvial fans and terraces. These soils formed in alluvium derived mainly from granodiorite, gneiss, and schist. Slope is 0 to 15 percent. Elevation is 900 to 1,500 feet. The average annual precipitation is 15 to 18 inches, the average annual air temperature is 46 to 48 degrees F, and the frost-free season at 32 degrees is 120 to 160 days.

Typical pedon of Brief gravelly sandy loam, 0 to 15 percent slopes, 1,000 feet south and 1,600 feet west of the northeast corner of sec. 29, T. 26 N., R. 20 E.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) gravelly sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; many fine roots; common fine and medium tubular pores; 10 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.

A—8 to 16 inches; dark grayish brown (10YR 4/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; many fine roots; common fine and medium tubular pores; 15 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.

Bw—16 to 26 inches; brown (10YR 5/3) gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine roots; many fine and medium tubular pores; 20 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

C—26 to 60 inches; light brownish gray (10YR 6/2) very gravelly coarse sandy loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; few medium tubular pores; 30 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral.

The particle-size control section is 15 to 35 percent rock fragments. The solum is 16 to 40 inches thick.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist. It is neutral or slightly alkaline.

The Bw horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is neutral or slightly alkaline.

The C horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 3 or 4 dry or moist. It is very gravelly coarse sandy loam, very gravelly sandy loam, or gravelly sandy loam. It is neutral to moderately alkaline.

Brisky Series

The Brisky series consists of shallow, well drained soils on mountainsides and ridgetops. These soils formed in colluvium derived from sandstone mixed with loess and volcanic ash. Slope is 30 to 60 percent. Elevation is 1,500 to 4,100 feet. The average annual precipitation is 20 to 32 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 110 to 130 days.

Typical pedon of Brisky very gravelly sandy loam in an area of Brisky-Rock outcrop complex, 30 to 60 percent slopes, 700 feet south and 100 feet east of the center of sec. 24, T. 22 N., R. 17 E.

A—0 to 4 inches; brown (10YR 5/3) very gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many fine roots; common fine and medium tubular pores; 25 percent pebbles, 5 percent cobbles, 5 percent stones, and 5 percent soft pebbles; slightly acid; clear wavy boundary.

Bw—4 to 10 inches; light yellowish brown (10YR 6/4) very gravelly sandy loam, yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; slightly hard, firm, nonsticky and nonplastic; common fine roots; common very fine, fine, and medium tubular pores; 35 percent pebbles, 5 percent cobbles, and 5 percent soft pebbles; slightly acid; abrupt wavy boundary.

R—10 to 14 inches; unweathered sandstone.

Depth to unweathered bedrock is 10 to 20 inches. The particle-size control section averages 35 to 50 percent rock fragments and 5 to 10 percent soft sandstone fragments. The profile is neutral or slightly acid.

The A horizon has value of 4 or 5 dry and chroma of 2 or 3 dry or moist.

The Bw horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 2 to 6 dry or moist. It is very gravelly sandy loam, very gravelly loam, or very cobbly loam.

Burch Series

The Burch series consists of very deep, well drained soils on terraces and bottom land. These soils formed in alluvium. Slope is 3 to 8 percent. Elevation is 1,200 to 1,500 feet. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 48 to 50 degrees F, and the frost-free season at 32 degrees is 165 to 190 days.

Typical pedon of Burch loam, 3 to 8 percent slopes, 1,900 feet east of the southwest corner of sec. 27, T. 24 N., R. 19 E.

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; many fine roots; common fine and medium tubular pores; 5 percent pebbles; neutral; clear smooth boundary.

BA—10 to 24 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and slightly plastic; common fine roots; many fine and very fine tubular pores; 5 percent pebbles; neutral; gradual wavy boundary.

Bw—24 to 34 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR

4/2) moist; moderate medium subangular blocky structure; hard, firm, nonsticky and slightly plastic; common fine roots; many fine and very fine tubular pores; 5 percent pebbles; neutral; clear wavy boundary.

C—34 to 60 inches; light yellowish brown (10YR 6/4) loam, brown (10YR 4/3) moist; massive; slightly hard, firm, nonsticky and slightly plastic; few fine roots; common fine tubular pores; 5 percent pebbles; neutral.

The Ap horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist.

The BA and Bw horizons have value of 4 to 6 dry and 3 or 4 moist, and they have chroma of 2 to 4 dry or moist. They are loam, very fine sandy loam, or silt loam. They are neutral or slightly alkaline.

The C horizon has value of 4 to 6 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry or moist. It is loam, very fine sandy loam, or silt loam. It is neutral or slightly alkaline.

Burnscreek Series

The Burnscreek series consists of very deep, well drained soils on alluvial fans and terraces. These soils formed in alluvium. Slope is 3 to 30 percent. Elevation is 1,200 to 2,400 feet. The average annual precipitation is 18 to 24 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 105 to 140 days.

Typical pedon of Burnscreek stony sandy loam, 3 to 30 percent slopes, 2,000 feet east and 2,450 feet north of the southwest corner of sec. 14, T. 27 N., R. 19 E.

Oe—1 inch to 0; decomposing forest litter.

A—0 to 3 inches; grayish brown (10YR 5/2) stony sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and few medium roots; few fine tubular pores; 10 percent pebbles, 5 percent cobbles, and 10 percent stones; 3 percent surface stones; slightly acid; clear smooth boundary.

BA—3 to 13 inches; brown (10YR 5/3) very stony sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; few very fine tubular pores; 5 percent pebbles, 15 percent cobbles, and 10 percent stones; slightly acid; gradual wavy boundary.

Bw—13 to 32 inches; brown (10YR 5/3) extremely cobbly sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and medium and few coarse roots; few fine tubular pores; 25 percent pebbles, 25 percent cobbles, and 15 percent stones; trace of pumice; neutral; diffuse wavy boundary.

C—32 to 60 inches; brown (10YR 5/3) extremely cobbly sandy loam, dark brown (10YR 3/3) moist; massive; soft, very friable, nonsticky and nonplastic; common medium and few fine and coarse roots; common fine tubular pores; 20 percent pebbles, 25 percent cobbles, and 20 percent stones; trace of pumice; neutral.

The particle-size control section is 35 to 70 percent rock fragments. The mollic epipedon is 10 to 20 inches thick. The profile is slightly acid or neutral.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist. It is 15 to 35 percent rock fragments.

The BA horizon has value of 2 or 3 moist and chroma of 2 or 3 dry or moist. It is very stony sandy loam, gravelly sandy loam, or cobbly fine sandy loam. It is 15 to 35 percent rock fragments.

The Bw horizon has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 3 or

4 dry or moist. It is extremely cobbly sandy loam, very cobbly coarse sandy loam, or very gravelly fine sandy loam. It is 35 to 75 percent rock fragments.

The C horizon has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 3 or 4 dry or moist. It is extremely cobbly sandy loam, very cobbly coarse sandy loam, or very gravelly fine sandy loam. It is 35 to 75 percent rock fragments.

Burrant Series

The Burrant series consists of very deep, well drained soils on terraces. These soils formed in alluvium and colluvium derived from sandstone mixed with loess. Slope is 3 to 25 percent. Elevation is 1,100 to 1,600 feet. The average annual precipitation is 18 to 24 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 105 to 140 days.

Typical pedon of Burrant loam, 8 to 25 percent slopes, 300 feet east and 800 feet north of the southwest corner of sec. 10, T. 24 N., R. 18 E.

Ap—0 to 4 inches; grayish brown (10YR 5/2) loam, very dark brown (10YR 2/2) moist; weak coarse granular structure; soft, friable, nonsticky and nonplastic; many fine and very fine roots; many coarse interstitial pores; neutral; gradual wavy boundary.

A—4 to 16 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many fine and very fine roots; common medium and fine interstitial pores; neutral; clear wavy boundary.

Bw1—16 to 28 inches; light yellowish brown (10YR 6/4) loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; common fine and very fine roots; few fine interstitial pores; slightly alkaline; gradual wavy boundary.

Bw2—28 to 42 inches; pale brown (10YR 6/3) loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; common fine and very fine roots; few fine interstitial pores; slightly alkaline; gradual wavy boundary.

C—42 to 60 inches; pale brown (10YR 6/3) loam, yellowish brown (10YR 5/4) moist; massive; soft, friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; slightly alkaline.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist.

The Bw horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry or moist. It is loam or silt loam. It is neutral or slightly alkaline.

The C horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 2 to 4 dry or moist. It is loam or silt loam. It is neutral or slightly alkaline.

Cashmont Series

The Cashmont series consists of very deep, well drained soils on alluvial fans. These soils formed in alluvium. Slope is 0 to 25 percent. Elevation is 1,200 to 1,800 feet. The average annual precipitation is 10 to 12 inches, the average annual air temperature is 48 to 50 degrees F, and the frost-free season at 32 degrees is 140 to 180 days.

Typical pedon of Cashmont sandy loam, 0 to 8 percent slopes, 1,200 feet east and 250 feet south of the northwest corner of sec. 32, T. 24 N., R. 18 E.

Ap—0 to 12 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; few very fine and fine tubular pores; 5 percent pebbles and 2 percent cobbles; neutral; abrupt smooth boundary.

Bw—12 to 30 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; few very fine and fine tubular pores; 15 percent pebbles and 5 percent cobbles; neutral; clear wavy boundary.

C1—30 to 40 inches; brown (10YR 5/3) gravelly coarse sandy loam, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common fine roots; few fine and medium tubular pores; 20 percent pebbles, 10 percent cobbles, and 5 percent stones; neutral; gradual smooth boundary.

C2—40 to 60 inches; pale brown (10YR 6/3) very gravelly loamy sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; few fine roots; few fine and medium tubular pores; 40 percent pebbles, 10 percent cobbles, and 5 percent stones; neutral.

Depth to the sandy or sandy-skeletal C2 horizon is 40 to 60 inches or more.

The A horizon has value of 4 or 5 dry and chroma of 2 or 3 dry or moist. It is sandy loam or gravelly sandy loam. It is slightly acid to slightly alkaline.

The Bw horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is gravelly fine sandy loam, gravelly sandy loam, or gravelly coarse sandy loam. It is neutral or slightly alkaline.

The C1 horizon has hue of 10YR or 2.5Y, value of 5 or 6 dry and 3 or 4 moist, and chroma of 3 or 4 dry or moist. It is gravelly sandy loam or gravelly coarse sandy loam. It is neutral or slightly alkaline.

The C2 horizon has hue of 10YR or 2.5Y, value of 5 or 6 dry and 3 or 4 moist, and chroma of 3 or 4 dry or moist. It is very gravelly coarse sandy loam, gravelly sand, or very gravelly loamy sand. It is neutral or slightly alkaline.

Chapot Series

The Chapot series consists of very deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from basalt with a minor amount of volcanic ash and landslide material. Slope is 30 to 60 percent. Elevation is 2,000 to 4,900 feet. The average annual precipitation is 22 to 40 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 85 to 125 days.

Typical pedon of Chapot gravelly sandy loam in an area of Shaser-Chapot complex, 30 to 60 percent slopes, 1,300 feet east of the center of sec. 35, T. 22 N., R. 17 E.

Oe—0.5 inch to 0; decomposing forest litter.

A—0 to 6 inches; light brownish gray (10YR 6/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine, medium, and coarse roots; common very fine tubular pores; 15 percent pebbles and 5 percent soft pebbles; neutral; clear smooth boundary.

BA—6 to 14 inches; light yellowish brown (10YR 6/4) very gravelly loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium roots; common medium tubular pores; 25 percent pebbles, 15 percent soft pebbles, and 10 percent cobbles; slightly acid; clear smooth boundary.

Bt1—14 to 24 inches; light yellowish brown (10YR 6/4) very gravelly loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; hard, very firm, slightly sticky and slightly plastic; common fine and medium roots; few fine and very fine tubular pores; 45 percent pebbles, 15 percent soft pebbles, and 10 percent cobbles; slightly acid; gradual wavy boundary.

Bt2—24 to 36 inches; brownish yellow (10YR 6/6) extremely gravelly clay loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; hard, very firm, sticky and plastic; few medium roots; common medium and coarse tubular pores; 50 percent pebbles, 10 percent soft pebbles, and 10 percent cobbles; neutral; gradual wavy boundary.

Bt3—36 to 60 inches; brownish yellow (10YR 6/6) extremely gravelly clay loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; hard, very firm, sticky and plastic; few medium roots; very few fine tubular pores; 50 percent pebbles, 10 percent soft pebbles, and 15 percent cobbles; neutral.

Thickness of the volcanic ash is 2 to 7 inches. The particle-size control section is 35 to 65 percent hard rock fragments. The profile is slightly acid or neutral.

The A horizon has hue of 5YR, 7.5YR, or 10YR, value of 4 or 5 dry and 2 or 3 moist, and chroma of 3 or 4 dry or moist. It is gravelly sandy loam or extremely bouldery loam.

The Bt horizon has hue of 5YR, 7.5YR, or 10YR, value of 4 to 6 dry and 3 to 5 moist, and chroma of 3 to 6 dry or moist. The upper part is gravelly loam, very gravelly loam, very cobbly loam, or very stony loam, and the lower part is very gravelly loam, very gravelly clay loam, extremely gravelly loam, very cobbly clay loam, very bouldery clay loam, or extremely gravelly clay loam.

Chinkmin Series

The Chinkmin series consists of soils that are moderately deep to cemented glacial till and are moderately well drained. These soils are on valley bottoms and mountainsides. They formed in volcanic ash mixed with colluvium over glacial till. Slope is 3 to 60 percent. Elevation is 2,500 to 5,000 feet. The average annual precipitation is 80 to 100 inches, the average annual air temperature is 39 to 41 degrees F, and the frost-free season at 32 degrees is 50 to 80 days.

Typical pedon of Chinkmin bouldery fine sandy loam, 3 to 30 percent slopes, 1,100 feet south and 100 feet west of the northeast corner of sec. 14, T. 26 N., R. 13 E.

Oi—5 inches to 0; undecomposed and partially decomposed needles, leaves, twigs, and cones.

E—0 to 2 inches; light gray (10YR 7/1) bouldery loamy very fine sand, light grayish brown (10YR 6/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; many very fine irregular pores; 10 percent pebbles; 3 percent surface boulders and stones; strongly acid; abrupt broken boundary.

Bhs1—2 to 4 inches; dark reddish brown (5YR 3/3) and strong brown (7.5YR 5/6) fine sandy loam, dark reddish brown (5YR 3/3) and dark brown (7.5YR 3/4) moist; moderate fine subangular blocky structure; hard, firm, nonsticky and nonplastic; moderately smeary; many very fine, fine, and medium and few coarse roots; common very fine and fine irregular pores; 10 percent pebbles; strongly acid; abrupt irregular boundary.

Bhs2—4 to 7 inches; strong brown (7.5YR 5/6) and reddish brown (5YR 4/4) gravelly fine sandy loam, strong brown (7.5YR 4/6) and dark reddish brown (5YR 3/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; weakly smeary; many very fine, fine, and medium and few coarse roots; many very fine and fine irregular pores; 15 percent pebbles; strongly acid; abrupt irregular boundary.

Bs1—7 to 13 inches; strong brown (7.5YR 5/6) and yellowish brown (10YR 5/6) gravelly sandy loam, strong brown (7.5YR 4/6) and dark yellowish brown (10YR 4/6) moist; weak fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; weakly smeary; many fine and medium and common coarse roots; many very fine and fine irregular pores; 20 percent pebbles; moderately acid; clear wavy boundary.

Bs2—13 to 18 inches; brownish yellow (10YR 6/6) and strong brown (7.5YR 5/6) gravelly sandy loam, dark yellowish brown (10YR 4/6) and strong brown (7.5YR 4/6) moist; weak fine subangular blocky structure and weak fine granular; slightly hard, friable, nonsticky and nonplastic; weakly smeary; many fine and medium and few coarse roots; many fine irregular pores; 25 percent pebbles; moderately acid; abrupt wavy boundary.

2Bs3—18 to 28 inches; yellowish brown (10YR 5/6) very gravelly loamy coarse sand, dark yellowish brown (10YR 4/6) moist; weak fine subangular blocky structure and weak fine granular; slightly hard, very friable, nonsticky and nonplastic; weakly smeary; common fine and medium and few coarse roots; many fine irregular pores; 40 percent pebbles and 10 percent cobbles; moderately acid; abrupt irregular boundary.

2Bs4—28 to 36 inches; pale yellow (5Y 7/3) and brownish yellow (10YR 6/6) very gravelly loamy coarse sand, olive (5Y 5/3) and strong brown (7.5YR 4/6) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine roots, many fine irregular pores; common patchy distinct iron oxide on faces of peds; 45 percent pebbles and 10 percent cobbles; moderately acid; abrupt wavy boundary.

2Bqm—36 to 60 inches; light gray (5Y 7/2) and brownish yellow (10YR 6/8) glacial till, olive (5Y 5/3) and strong brown (7.5YR 5/8) moist; massive; very hard, very firm; few fine roots; few fine irregular pores; common patchy distinct iron oxide between sand grains and on rock fragments; 30 percent pebbles, 25 percent cobbles, and 10 percent stones; moderately acid.

Depth to cemented glacial till is 20 to 40 inches. The particle-size control section averages 35 to 70 percent rock fragments. A perched water table is present in November through July, and it is at a depth of 1.5 to 3.0 feet.

The E horizon has hue of 10YR or 7.5YR, value of 6 or 7 dry, and chroma of 1 or 2 dry or moist. It is strongly acid or very strongly acid.

The Bhs horizon has hue of 5YR or 7.5YR, value of 3 to 5 dry and 3 or 4 moist, and chroma of 4 to 6 dry or moist. It is fine sandy loam, gravelly fine sandy loam, or gravelly sandy loam. It is strongly acid to slightly acid.

The 2Bs horizon has hue of 7.5YR or 10YR, value of 5 or 6 dry, and chroma of 4 to 6 dry or moist. It is very cobbly fine sandy loam, very cobbly sandy loam, very gravelly sandy loam, gravelly sandy loam, or very gravelly loamy coarse sand. It is moderately acid or slightly acid.

The 2Bqm horizon has hue of 10YR or 5Y, value of 5 to 7 dry and 4 or 5 moist, and chroma of 2 to 6 moist or dry.

Chiwaukum Series

The Chiwaukum series consists of very deep, well drained soils on mountainsides and valley bottoms. These soils formed in volcanic ash and pumice over glacial till. Slope is 3 to 60 percent. Elevation is 2,600 to 5,500 feet. The average annual precipitation is 50 to 70 inches, the average annual air temperature is 40 to 43 degrees F, and the frost-free season at 32 degrees is 60 to 110 days.

Typical pedon of Chiwaukum bouldery fine sandy loam, 30 to 60 percent slopes, 900 feet east and 2,350 feet north of the southwest corner of sec. 9, T. 26 N., R. 15 E.

Oi—1 inch to 0; undecomposed forest litter.

E—0 to 2 inches; light gray (10YR 7/1) bouldery fine sandy loam, gray (10YR 6/1) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; common very fine tubular pores; 5 percent pebbles and 5 percent cobbles; 5 percent surface boulders; moderately acid; abrupt smooth boundary.

Bs1—2 to 5 inches; brown (7.5YR 5/4) fine sandy loam; dark brown (7.5YR 4/4) moist; moderate medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; moderate fine, medium, and coarse roots; common very fine tubular pores; 5 percent pebbles and a few cobbles; slightly acid; clear wavy boundary.

Bs2—5 to 17 inches; brown (7.5YR 5/4) gravelly sandy loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; moderate fine and medium roots; common very fine tubular pores; 15 percent pebbles and 5 percent cobbles; slightly acid; gradual wavy boundary.

BC—17 to 26 inches; yellowish brown (10YR 5/4) cobbly sandy loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; moderate fine and medium roots; few very fine tubular pores; 5 percent pebbles, 10 percent cobbles, and 2 percent stones; slightly acid; clear wavy boundary.

2C—26 to 60 inches; light brownish gray (10YR 6/2) extremely stony coarse sandy loam, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; few fine, medium, and coarse roots; few fine tubular pores; 25 percent pebbles, 15 percent cobbles, and 20 percent stones; slightly acid.

Depth to the loamy-skeletal 2C horizon is 20 to 40 inches.

The E horizon has value of 5 to 7 dry and 4 to 6 moist, and it has chroma of 1 or 2 dry and 1 to 3 moist. It is bouldery loamy sand, stony sandy loam, bouldery fine sandy loam, very bouldery fine sandy loam, or very bouldery loamy sand. It is moderately acid or strongly acid.

The Bs horizon has value of 4 to 6 dry and 3 to 5 moist, and it has chroma of 2 to 6 dry or moist. It is fine sandy loam or sandy loam and may be gravelly, cobbly, or stony. It is slightly acid to strongly acid.

The BC horizon has hue of 10YR or 7.5YR, value of 5 to 7 dry and 3 to 5 moist, and chroma of 3 or 4 dry and 3 to 6 moist. It is sandy loam or fine sandy loam and is cobbly, gravelly, or very cobbly. It is moderately acid or slightly acid.

The 2C horizon has hue of 2.5Y or 10YR, value of 5 to 7 dry and 4 to 6 moist, and chroma of 2 to 6 dry and 1 to 4 moist. It is coarse sandy loam, loamy sand, or sandy loam and may be very gravelly, very cobbly, very stony, extremely gravelly, extremely cobbly, or extremely stony. The horizon is moderately acid or slightly acid.

Chiwawa Series

The Chiwawa series consists of very deep, well drained soils on terraces. These soils formed in volcanic ash and pumice over glacial outwash. Slope is 0 to 3 percent. Elevation is 1,700 to 2,500 feet. The average annual precipitation is 25 to 40 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Chiwawa cindery fine sandy loam, 0 to 3 percent slopes, 2,000 feet south and 1,500 feet east of the northwest corner of sec. 9, T. 25 N., R. 17 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 2 inches; grayish brown (10YR 5/2) cindery fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine, medium, and coarse roots; few fine tubular pores; 15 percent pumice; neutral; abrupt smooth boundary.

Bw1—2 to 5 inches; brown (10YR 5/3) cindery fine sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine, medium, and coarse roots; common very fine tubular pores; 15 percent pumice; neutral; gradual wavy boundary.

Bw2—5 to 10 inches; pale brown (10YR 6/3) cindery fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine, medium, and coarse roots; common very fine tubular pores; 15 percent pumice; neutral; gradual wavy boundary.

Bw3—10 to 26 inches; pale brown (10YR 6/3) cindery fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine, medium, and coarse roots; common fine and medium tubular pores; 15 percent pumice; neutral; clear wavy boundary.

BC—26 to 42 inches; pale brown (10YR 6/3) cindery fine sandy loam, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; few fine roots; few very fine tubular pores; 15 percent pumice and 5 percent pebbles; neutral; abrupt wavy boundary.

2C—42 to 60 inches; multicolored extremely gravelly coarse sand; single grain; loose; 50 percent pebbles, 20 percent cobbles, and 5 percent stones; neutral.

The particle-size control section is 60 to 90 percent volcanic ash and pumice. The profile is 15 to 35 percent pumice. Depth to the sandy-skeletal 2C horizon is 40 to 60 inches. An E horizon is present in some pedons.

The A horizon has value of 4 to 6 dry and 3 to 5 moist, and it has chroma of 1 or 2 dry or moist. It is moderately acid to neutral.

The Bw1 horizon has value of 4 or 5 dry and 2 or 3 moist. It is cindery fine sandy loam or cindery sandy loam. It is slightly acid or neutral.

The Bw2, Bw3, and BC horizons have value of 5 to 7 dry and 4 or 5 moist, and they have chroma of 3 or 4 dry or moist. They are cindery fine sandy loam or cindery sandy loam. They are slightly acid or neutral.

The BC horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry or moist. It is cindery fine sandy loam or cindery sandy loam. It is slightly acid or neutral.

The 2C horizon is extremely gravelly coarse sand, very gravelly sand, or extremely cobbly sand. It is slightly acid or neutral.

Choralmont Series

The Choralmont series consists of very deep, well drained soils on mountainsides and terraces. These soils formed in volcanic ash and pumice over glacial till and in volcanic ash and pumice in a few areas. Slope is 3 to 60 percent. Elevation is 2,000 to 5,900 feet. The average annual precipitation is 35 to 50 inches, the average annual air temperature is 41 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Choralmont cindery sandy loam, till substratum, 3 to 30 percent slopes, 2,000 feet south and 900 feet east of the northwest corner of sec. 11, T. 27 N., R. 17 E.

Oe—1.5 inches to 0; partially decomposed organic matter.

C—0 to 0.5 inch; light gray (10YR 7/2) loamy fine sand, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common very fine irregular pores; 10 percent pumice; slightly acid; abrupt broken boundary.

CB—0.5 inch to 3.0 inches; light gray (10YR 7/2) cindery sandy loam, dark brown (10YR 4/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine roots; common fine irregular pores; 15 percent pumice; slightly acid; clear wavy boundary.

B/C—3 to 9 inches; light gray (10YR 7/2) (C part) and light yellowish brown (10YR 6/4) (B part) cindery sandy loam, brown (10YR 5/3) (C part) and dark yellowish brown (10YR 4/4) (B part) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common fine irregular and tubular pores; 30 percent pumice; slightly acid; gradual wavy boundary.

Bw1—9 to 17 inches; very pale brown (10YR 7/3) and light yellowish brown (10YR 6/4) very cindery sandy loam, brown (10YR 5/3) and dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and medium and few coarse roots; common fine irregular pores and few fine tubular pores; 40 percent pumice; slightly acid; clear wavy boundary.

Bw2—17 to 28 inches; light yellowish brown (10YR 6/4) very cindery loamy sand, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; many very fine and common medium irregular pores; 40 percent pumice; neutral; clear wavy boundary.

Bw3—28 to 33 inches; very pale brown (10YR 7/4) and light yellowish brown (10YR 6/4) extremely cindery loamy sand, yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic; many very fine and fine roots; many fine irregular pores; 60 percent pumice; neutral; abrupt wavy boundary.

C1—33 to 48 inches; yellow (10YR 8/6) and white (10YR 8/2) cinders, yellow (10YR 7/8) and white (10YR 8/2) moist; single grain; loose, nonsticky and nonplastic; common medium and few very fine roots; many coarse irregular pores; 90 percent pumice and 5 percent pebbles (pyroclastic); yellow (10YR 7/8) iron stains on pumice; neutral; abrupt smooth boundary.

2C2—48 to 54 inches; light gray (2.5Y 7/2) and pink (7.5YR 7/4) loamy sand (sand-sized pumice), light brownish gray (2.5Y 6/2) and strong brown (7.5YR 5/6) moist; single grain; loose, nonsticky and nonplastic; common fine and medium and few coarse roots; many fine irregular pores; yellowish brown (10YR 5/6) iron stains on sand grains; 2 percent pumice; neutral; abrupt wavy boundary.

3Bwb—54 to 60 inches; light gray (2.5Y 7/2) and reddish yellow (7.5YR 6/6) fine sandy loam, grayish brown (2.5Y 5/2) and strong brown (7.5YR 5/6) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few fine and medium roots; few fine irregular and tubular pores; few platelike dark-colored masses; 2 percent pebbles; neutral.

The particle-size control section is dominantly volcanic ash and averages 35 to 60 percent pumice. Depth to cinders is 15 to 40 inches, and depth to the 3Bwb horizon (glacial drift) is 40 to 60 inches or more. The profile is moderately acid to neutral.

The C horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 1 to 3 dry or moist.

The Bw1 horizon has hue of 10YR or 7.5YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 3 or 4 dry or moist. It is cindery sandy loam or very cindery sandy loam.

The Bw2 and Bw3 horizons have value of 6 to 8 dry and 5 to 8 moist, and they have chroma of 1 to 6 dry or moist. They are very cindery loamy sand or extremely cindery loamy sand.

The C1 horizon has value of 7 or 8 dry and 5 to 7 moist, and it has chroma of 1 to 6 dry and 2 to 8 moist. It is 90 percent pumice.

The 2C2 horizon has hue of 7.5YR, 10YR, or 2.5Y, value of 6 to 8 dry and 4 to 7 moist, and chroma of 1 to 6 dry and 1 to 8 moist. It is loamy sand, sand, or very coarse sand that consists of volcanic ash and sand-sized pumice.

The 3Bwb horizon has hue of 7.5YR, 10YR, or 2.5Y, value of 5 to 7 dry and 4 or 5 moist, and chroma of 2 to 6 dry or moist. It is gravelly fine sandy loam, cobbly sandy loam, very cobbly sandy loam, very cobbly very fine sandy loam, very stony sandy loam, very gravelly sandy loam, or fine sandy loam.

Chumstick Series

The Chumstick series consist of shallow, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from gneiss, schist, and granite mixed with volcanic ash and loess. Slope is 3 to 90 percent. Elevation is 1,500 to 5,200 feet. The average annual precipitation is 24 to 32 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Chumstick stony sandy loam, 30 to 60 percent slopes, 50 feet east and 300 feet south of the northwest corner of sec. 5, T. 25 N., R. 19 E.

A—0 to 4 inches; brown (10YR 4/3) stony sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; common very fine tubular pores; 20 percent pebbles, 10 percent cobbles, and 5 percent stones; 3 percent surface stones; neutral; clear wavy boundary.

AB—4 to 14 inches; brown (10YR 5/3) very stony sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; common very fine tubular pores; 25 percent pebbles, 10 percent cobbles, and 10 percent stones; neutral; clear wavy boundary.

Bw—14 to 19 inches; brown (10YR 5/3) extremely stony sandy loam, dark yellowish brown (10YR 3/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; common very fine tubular pores; 25 percent pebbles, 15 percent cobbles, and 20 percent stones; slightly acid; abrupt irregular boundary.

R—19 to 23 inches; fractured unweathered schist.

The particle-size control section averages 35 to 60 percent rock fragments. Depth to bedrock is 10 to 20 inches. The profile is slightly acid or neutral.

The A and AB horizons have value of 4 or 5 dry and 2 or 3 moist, and they have chroma of 2 or 3 dry or moist. The AB horizon is very gravelly sandy loam, very cobbly sandy loam, very stony sandy loam, or extremely gravelly fine sandy loam.

The Bw horizon has value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry or moist. It is very gravelly fine sandy loam, very cobbly sandy loam, extremely gravelly fine sandy loam, very stony sandy loam, or extremely stony sandy loam.

Cle Elum Series

The Cle Elum series consists of moderately deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from sandstone mixed with minor amounts of loess and volcanic ash. Slope is 30 to 75 percent. Elevation is 1,000 to 3,800 feet. The average annual precipitation is 18 to 28 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 150 to 185 days.

Typical pedon of Cle Elum loam, 30 to 60 percent south slopes, 2,500 feet south and 2,000 feet west of the northeast corner of sec. 31, T. 24 N., R. 18 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 5 inches; grayish brown (10YR 5/2) loam, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; many fine, medium, and coarse roots; many fine and medium irregular pores; 5 percent pebbles and 5 percent soft pebbles; neutral; clear wavy boundary.

Bt1—5 to 14 inches; light brownish gray (10YR 6/2) loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few medium roots; many fine and medium irregular pores; 5 percent pebbles and 5 percent soft pebbles; neutral; gradual wavy boundary.

Bt2—14 to 26 inches; pale brown (10YR 6/3) clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few fine and medium roots; common fine and medium irregular pores; 5 percent pebbles and 5 percent soft pebbles; neutral; abrupt wavy boundary.

Cr—26 to 36 inches; weathered sandstone.

The particle-size control section averages 27 to 35 percent clay. Depth to weathered bedrock is 20 to 40 inches. The profile is moderately acid to neutral.

The A horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 1 to 3 dry or moist.

The E horizon, where present, has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 2 to 4 dry or moist.

The Bt horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 3 or 4 dry or moist. It is loam, clay loam, or sandy clay loam.

Coopmont Series

The Coopmont series consists of very deep, well drained soils on mountains. These soils formed in volcanic ash and pumice over colluvium and residuum derived from granodiorite. Slope is 3 to 60 percent. Elevation is 4,000 to 6,000 feet. The average annual precipitation is 30 to 50 inches, the average annual air temperature is 39 to 41 degrees F, and the frost-free season at 32 degrees is about 60 to 90 days.

Typical pedon of Coopmont fine sandy loam, 30 to 60 percent slopes, about 1.5 miles south of Cooper Mountain; 2.3 miles north of the northeast corner of sec. 4, T. 28 N., R. 22 E.

Oe—2 inches to 0; partially decomposed organic matter.

A—0 to 1 inch; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; 5 percent pumice and 2 percent pebbles; neutral; abrupt wavy boundary.

C—1 to 5 inches; white (10YR 8/1) fine sandy loam, light brownish gray (10YR 6/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; 10 percent pumice and 2 percent pebbles; slightly acid; abrupt wavy boundary.

Bw1—5 to 12 inches; pale brown (10YR 6/3) cindery sandy loam, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots and few medium roots; 25 percent pumice (2 to 4 millimeters in size) and 2 percent pebbles; neutral; gradual wavy boundary.

Bw2—12 to 28 inches; light yellowish brown (10YR 6/4) cindery loamy sand, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonstick and nonplastic; many very fine and fine and few medium roots; 30 percent pumice (2 to 4 millimeters in size) and 2 percent pebbles; neutral; abrupt wavy boundary.

2Bw3—28 to 34 inches; light gray (10YR 7/2) and light yellowish brown (10YR 6/4) very gravelly sandy loam, grayish brown (2.5Y 5/2) and yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; many very fine and fine and common medium roots; 35 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral; clear wavy boundary.

2Bw4—34 to 50 inches; very pale brown (10YR 7/3) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine and few medium roots; 35 percent pebbles, 10 percent cobbles, and 5 percent stones; neutral; clear wavy boundary.

2C—50 to 60 inches; very pale brown (10YR 7/3) extremely gravelly sand, yellowish brown (10YR 5/4) moist; single grain; loose; nonsticky and nonplastic; few very fine and fine roots; 50 percent pebbles, 10 percent cobbles, and 10 percent stones; neutral.

The upper part of the particle-size control section is dominantly volcanic ash and pumice. The content of pumice more than 2 millimeters in size averages 10 to 35 percent. The lower part of the particle-size control section is 40 to 60 percent rock fragments. Depth to the loamy-skeletal 2Bw horizon is 25 to 36 inches. The profile is slightly acid or neutral.

The C horizon has value of 6 to 8 dry and 5 to 7 moist, and it has chroma of 1 or 2 dry or moist.

The Bw1 horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry or moist. It is cindery sandy loam or cindery fine sandy loam.

The Bw2 horizon has value of 5 to 7 dry and 4 to 6 moist, and it has chroma of 3 or 4 dry or moist. It is cindery loamy sand or cindery sandy loam. The content of pumice averages 50 to 80 percent, of which 20 to 35 percent is more than 2 millimeters in size.

The 2Bw horizon has hue of 10YR or 2.5YR, value of 5 to 7 dry and 4 or 5 moist, and chroma of 2 to 4 dry or moist. It is very gravelly sandy loam, very gravelly loam, or very cobbly sandy loam. It is 30 to 50 percent pebbles, 5 to 20 percent cobbles, and 0 to 10 percent stones.

The 2C horizon has value of 6 or 7 dry and 4 to 5 moist, and it has chroma of 3 or 4 dry or moist. It is extremely gravelly loamy sand or extremely gravelly sand. It is 40 to 60 percent pebbles, 10 to 20 percent cobbles, and 5 to 15 percent stones.

Cowiche Series

The Cowiche series consists of deep and very deep, well drained soils on foothills. These soils formed in loess over residuum derived from sandstone or schist. Slope is 3 to 70 percent. Elevation is 1,200 to 4,800 feet. The average annual precipitation is 9 to 12 inches, the average annual air temperature is 48 to 50 degrees F, and the frost-free season at 32 degrees is 165 to 185 days.

Typical pedon of Cowiche silt loam in an area of Cowiche complex, 3 to 25 percent slopes, 1,900 feet south and 1,100 feet east of the northwest corner of sec. 23, T. 24 N., R. 19 E.

A1—0 to 10 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many fine roots; common fine tubular pores; 5 percent pebbles; slightly alkaline; gradual smooth boundary.

A2—10 to 20 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, friable, slightly sticky and plastic; many fine roots; many fine tubular pores; 5 percent pebbles; slightly alkaline; clear wavy boundary.

Bt1—20 to 29 inches; brown (10YR 5/3) loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and plastic; common fine roots; many fine tubular pores; 10 percent pebbles; slightly alkaline; clear wavy boundary.

Bt2—29 to 40 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, very firm, sticky and plastic; common fine roots; many fine and very fine tubular pores; 5 percent pebbles; slightly alkaline; clear wavy boundary.

Bt3—40 to 50 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 4/4) moist; moderate coarse subangular blocky structure; hard, very firm, sticky and plastic; few fine roots; many fine and very fine tubular pores; 5 percent pebbles and 5 percent cobbles; neutral; abrupt wavy boundary.

Cr—50 to 60 inches; weathered sandstone.

The particle-size control section averages 18 to 30 percent clay. Depth to weathered bedrock is 40 to 60 inches or more.

The A horizon has value of 4 or 5 dry and chroma of 2 or 3 dry or moist. It is silt loam or loam. It is neutral or slightly alkaline.

The Bt horizon has value of 5 to 7 dry and chroma of 3 or 4 dry or moist. It is silt loam, loam, clay loam, or sandy clay loam. It is neutral or slightly alkaline.

The C horizon, where present, has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist. It is loamy fine sand, very fine sandy loam, sandy loam, or loamy sand. It is slightly alkaline or moderately alkaline.

Cryomont Series

The Cryomont series consists of very deep, somewhat excessively drained soils on flood plains and alluvial fans. These soils formed in alluvium. Slope is 0 to 30 percent. Elevation is 2,000 to 3,600 feet. The average annual precipitation is 35 to 75 inches, the average annual air temperature is 40 to 42 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Cryomont stony fine sandy loam, 0 to 5 percent slopes, 300 feet south and 100 feet west of the center of sec. 10, T. 27 N., R. 15 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 5 inches, grayish brown (10YR 5/2) stony fine sandy loam, very dark gray (10YR 3/1) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common fine and medium tubular pores; 15 percent pebbles, 5 percent cobbles, and 5 percent stones; 3 percent surface stones and boulders; neutral; clear smooth boundary.

Bw—5 to 12 inches, light brownish gray (10YR 6/2) very gravelly loamy sand, dark grayish brown (10YR 4/2) moist; single grain, loose, nonsticky and nonplastic; common fine and very fine roots; few medium tubular pores; 30 percent pebbles, 15 percent cobbles, 5 percent stones, and 5 percent boulders; slightly acid; clear wavy boundary.

2C—12 to 60 inches, multicolored extremely gravelly coarse sand; single grain, loose, nonsticky and nonplastic; 50 percent pebbles, 20 percent cobbles, 5 percent stones, and 5 percent boulders; neutral.

Depth to the sand and gravel 2C horizon is 10 to 20 inches. The particle-size control section is 10 to 20 inches. The profile is moderately acid to neutral. Frequent and brief, or rare periods of flooding occur in December through June.

The A horizon has chroma of 1 or 2 moist. It is stony fine sandy loam or very stony fine sandy loam.

The Bw horizon has value of 3 or 4 moist and chroma of 2 or 3 dry. It is very gravelly loamy sand or stratified very gravelly fine sandy loam and very cobbly fine sand. The horizon is 35 to 60 percent rock fragments.

The 2C horizon is extremely gravelly coarse sand, extremely gravelly sand, or extremely cobbly sand.

Culving Series

The Culving series consists of moderately deep, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from serpentine mixed with minor amounts of volcanic ash and loess. Slope is 30 to 60 percent. Elevation is 2,400 to 5,000 feet. The average annual precipitation is 27 to 50 inches, the average annual air temperature is 42 to 44 degrees F, and the average frost-free season at 32 degrees is 75 to 125 days.

Typical pedon of Culving gravelly loam in an area of Culving-Rock outcrop complex, 30 to 60 percent slopes, 2,140 feet east and 1,000 feet south of the northwest corner of sec. 11, T. 22 N., R. 17 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 4 inches; brown (10YR 5/3) gravelly loam, dark yellowish brown (10YR 3/4) moist; weak medium granular structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; very few fine tubular pores; 10 percent pebbles and 5 percent cobbles; slightly acid; abrupt wavy boundary.

Bw1—4 to 8 inches; pale brown (10YR 6/3) very gravelly loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common fine roots; few fine tubular pores; 25 percent pebbles and 10 percent cobbles; neutral; gradual smooth boundary.

Bw2—8 to 21 inches; light olive brown (2.5Y 5/4) very gravelly loam, dark grayish brown (2.5Y 4/2) moist; weak medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine roots; few fine tubular pores; 45 percent pebbles and 10 percent cobbles; neutral; abrupt smooth boundary.

R—21 to 25 inches; unweathered serpentine.

The particle-size control section is 35 to 85 percent rock fragments and 20 to 30 percent clay. Depth to unweathered bedrock is 20 to 40 inches. The profile is slightly acid or neutral.

The A horizon has value of 5 or 6 dry and chroma of 3 or 4 moist or dry.

The Bw1 horizon has value of 5 or 6 dry and chroma of 3 or 4 dry and 2 to 4 moist. It is gravelly loam or very gravelly loam.

The Bw2 horizon has hue of 10YR or 2.5Y, value of 5 or 6 dry and 4 or 5 moist, and chroma of 4 to 6 dry and 2 to 4 moist. It is very gravelly loam, very gravelly clay loam, or extremely gravelly clay loam.

Culvop Series

The Culvop series consists of shallow, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from serpentine mixed with volcanic ash. Slope is 30 to 60 percent. Elevation is 5,000 to 6,800 feet. The average annual precipitation is 35 to 50 inches, the average annual air temperature is 39 to 41 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Culvop very gravelly loam, 30 to 60 percent slopes, 1,000 feet west of the center of sec. 9, T. 22 N., R. 17 E.

Oi—1 inch to 0; undecomposed forest litter.

E—0 to 1 inch; gray (10YR 6/1) gravelly sandy loam, grayish brown (10YR 5/2) moist; weak fine granular structure; soft, friable, nonsticky and nonplastic; common fine roots; few fine tubular pores; 20 percent pebbles; moderately acid; clear smooth boundary.

Bs1—1 to 10 inches; light yellowish brown (10YR 6/4) very gravelly loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; many fine roots; common fine and medium tubular pores; 40 percent pebbles and 10 percent cobbles; slightly acid; clear smooth boundary.

Bs2—10 to 16 inches; yellowish brown (10YR 5/4) very gravelly loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; many fine roots; many fine and medium tubular pores; 40 percent pebbles and 10 percent cobbles; slightly acid; abrupt wavy boundary.

2R—16 to 20 inches; unweathered serpentine.

The particle-size control section is 35 to 65 percent rock fragments. Depth to unweathered bedrock is 14 to 20 inches. The profile is moderately acid or slightly acid.

The E horizon has value of 6 or 7 dry and chroma of 1 or 2 dry and 2 or 3 moist.

The Bs horizon has hue of 10YR or 7.5YR and chroma of 3 or 4 dry or moist. It is very gravelly loam or extremely gravelly loam.

Devore Series

The Devore series consists of moderately deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from gneiss, schist, and granodiorite mixed with volcanic ash. Slopes are 30 to 75 percent. Elevation is 4,200 to 7,200 feet. The average annual precipitation is 40 to 50 inches, the average annual air temperature is 39 to 41 degrees F, and the frost-free season at 32 degrees is 50 to 110 days.

Typical pedon of Devore stony fine sandy loam in an area of Devore-Rock outcrop complex, 50 to 75 percent slopes, 2,200 feet west and 1,400 feet south of the northeast corner of sec. 29, T. 29 N., R. 19 E.

Oi and Oe—0.5 inch to 0; decomposed and undecomposed forest litter.

A—0 to 2 inches; light brownish gray (10YR 6/2) stony fine sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many fine and medium roots; many fine and medium tubular pores; 15 percent pebbles and 5 percent cobbles; 5 to 15 percent surface stones; moderately acid; clear wavy boundary.

Bw—2 to 8 inches; light yellowish brown (10YR 6/4) very stony sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; many fine, medium, and coarse tubular pores; 20 percent pebbles, 10 percent cobbles, and 15 percent stones; moderately acid; gradual wavy boundary.

2C1—8 to 14 inches; very pale brown (10YR 7/4) very stony sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, friable, nonsticky and nonplastic; many fine and medium roots; many fine, medium, and coarse tubular pores; 25 percent pebbles, 10 percent cobbles, and 20 percent stones; slightly acid; gradual wavy boundary.

2C2—14 to 25 inches; very pale brown (10YR 7/4) extremely stony sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine and medium roots; many fine, medium, and coarse tubular pores; 40 percent pebbles, 10 percent cobbles, and 35 percent stones; moderately acid; abrupt wavy boundary.

2R—25 to 29 inches; fractured unweathered granodiorite.

The particle-size control section averages 35 to 80 percent rock fragments. The upper part of the particle-size control section has an admixture of volcanic ash with less than 60 percent pyroclastic material. Depth to unweathered bedrock is 20 to 40 inches.

The A horizon has value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 1 to 3 dry or moist. It is strongly acid or moderately acid.

The Bw horizon has value of 4 to 6 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry or moist. It is very stony sandy loam, extremely cobbly sandy loam, or very cobbly sandy loam. It is moderately acid to neutral.

The 2C horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 3 to 6 dry or moist. It is extremely stony sandy loam, extremely cobbly sandy loam, very stony sandy loam, or extremely stony fine sandy loam. It is moderately acid to neutral.

Dinkelman Series

The Dinkelman series consists of deep, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from granodiorite mixed with some volcanic ash and loess. Slope is 30 to 90 percent. Elevation is 1,800 to 3,000 feet. The average annual precipitation is 15 to 20 inches, the average annual air temperature is 43 to 46 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Dinkelman gravelly sandy loam, 30 to 60 percent slopes, 1,500 feet east and 2,600 feet south of the northwest corner of sec. 8, T. 26 N., R. 21 E.

Oe—2 inches to 0; partially decomposed needles, twigs, cones, and dry grass.

A1—0 to 3 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, friable, slightly sticky and nonplastic; common medium and coarse roots; many fine and medium tubular pores; 25 percent pebbles; slightly acid; gradual wavy boundary.

A2—3 to 15 inches; grayish brown (10YR 5/2) gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, friable, slightly sticky and nonplastic; common fine, medium, and coarse roots; many fine and medium tubular pores; 30 percent pebbles; slightly acid; gradual wavy boundary.

Bw—15 to 42 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; few medium and coarse roots; many fine and medium tubular pores; 25 percent pebbles; neutral; clear wavy boundary.

Cr—42 to 52 inches; weathered granodiorite.

Depth to weathered bedrock is 40 to 60 inches. The particle-size control section averages 15 to 35 percent rock fragments. The profile is slightly acid to slightly alkaline.

The A horizon has value of 4 or 5 dry and chroma of 1 to 3 dry or moist. The A2 horizon is sandy loam, gravelly sandy loam, or gravelly coarse sandy loam.

The AB horizon, where present, has value of 5 or 6 dry and chroma of 3 or 4 dry or moist. It is gravelly sandy loam, sandy loam, gravelly loam, or gravelly coarse sandy loam.

The Bw horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry or moist. It is gravelly loam, coarse sandy loam, gravelly coarse sandy loam, or gravelly sandy loam.

Dinkels Series

The Dinkels series consists of deep, well drained soils on mountainsides and side slopes of plateaus. These soils formed in colluvium derived from granodiorite mixed with loess and volcanic ash. Slope is 8 to 70 percent. Elevation is 1,200 to 2,600 feet.

The average annual precipitation is 10 to 15 inches, the average annual air temperature is 46 to 48 degrees F, and the frost-free season at 32 degrees is 90 to 140 days.

Typical pedon of Dinkels gravelly sandy loam, 45 to 70 percent slopes, 1,200 feet east and 1,300 feet south of the northwest corner of sec. 1, T. 26 N., R. 21 E.

A1—0 to 3 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; few very fine tubular pores; 15 percent pebbles; neutral; clear smooth boundary.

A2—3 to 11 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure parting to weak fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; few very fine tubular pores; 10 percent pebbles and 5 percent cobbles; neutral; clear wavy boundary.

Bw1—11 to 22 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine roots; common very fine tubular pores; 20 percent pebbles and 5 percent cobbles; neutral; clear wavy boundary.

Bw2—22 to 42 inches; light yellowish brown (10YR 6/4) gravelly coarse sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few fine and medium roots; common very fine tubular pores; 25 percent pebbles; neutral; gradual wavy boundary.

C—42 to 59 inches; pale brown (10YR 6/3) gravelly coarse sandy loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; few fine and medium roots; common very fine and fine tubular pores; 25 percent pebbles; neutral; abrupt wavy boundary.

R—59 to 63 inches; unweathered granodiorite.

Depth to unweathered bedrock is 40 to 60 inches. The particle-size control section averages 15 to 35 percent rock fragments. The profile is neutral or slightly alkaline.

The A horizon has chroma of 2 or 3 dry or moist. It is gravelly sandy loam or fine sandy loam.

The Bw horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 3 or 4 moist or dry. It is gravelly coarse sandy loam, gravelly sandy loam, or sandy loam.

The C horizon, where present, has value of 4 or 5 moist and chroma of 3 or 4 moist or dry. It is gravelly coarse sandy loam, gravelly sandy loam, very gravelly coarse sandy loam, very gravelly sandy loam, or very cobbly coarse sandy loam.

Domkey Series

The Domkey series consists of deep, well drained soils on mountainsides. These soils formed in volcanic ash and pumice over weathered granodiorite. Slope is 5 to 60 percent. Elevation is 1,200 to 4,500 feet. The average annual precipitation is 18 to 25 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Domkey sandy loam, 30 to 60 percent slopes, 2,400 feet west and 500 feet south of the northeast corner of sec. 11, T. 26 N., R. 19 E.

Oi—1 inch to 0; undecomposed forest litter.

A1—0 to 3 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many fine and medium roots; many fine and medium interstitial pores; 10 percent pebbles and 5 percent pumice; neutral; gradual smooth boundary.

A2—3 to 10 inches; pale brown (10YR 6/3) sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many fine, medium, and coarse roots; many fine, medium, and coarse interstitial pores; 10 percent pebbles and 5 percent pumice; neutral; gradual wavy boundary.

Bw—10 to 18 inches; light brownish gray (10YR 6/2) gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; many fine and medium roots; common fine and medium interstitial pores; 10 percent pebbles, 5 percent cobbles, and 5 percent pumice; neutral; gradual wavy boundary.

BC—18 to 35 inches; pale brown (10YR 6/3) gravelly coarse sandy loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; common fine and medium interstitial pores; 10 percent pebbles, 5 percent cobbles, and 5 percent pumice; neutral; gradual wavy boundary.

2C—35 to 45 inches; light yellowish brown (10YR 6/4) very gravelly loamy coarse sand, dark grayish brown (10YR 4/2) moist; single grain; soft, friable, nonsticky and nonplastic; few fine roots; 30 percent pebbles and 5 percent cobbles; neutral; clear wavy boundary.

2Cr—45 to 55 inches; weathered granodiorite.

Depth to weathered bedrock is 40 to 60 inches. The upper part of the particle-size control section is dominantly volcanic ash and is 10 to 25 percent rock fragments, and the lower part averages 25 to 40 percent rock fragments.

The A1 horizon has chroma of 2 or 3 dry or moist.

The A2 horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry or moist. It is sandy loam or fine sandy loam.

The Bw and BC horizons have value of 5 to 7 dry and 3 or 4 moist, and they have chroma of 2 to 4 dry or moist. They are gravelly sandy loam, gravelly coarse sandy loam, or fine sandy loam.

The 2C horizon has value of 5 or 7 dry and 4 or 5 moist, and it has chroma of 2 to 4 dry or moist. It is very gravelly loamy coarse sand or gravelly loamy coarse sand.

Dragoon Series

The Dragoon series consists of moderately deep, well drained soils on mountainsides, ridgetops, and foothills. These soils formed in residuum and colluvium derived from granitic rock mixed with loess and volcanic ash in the upper part. Slope is 3 to 90 percent. Elevation is 2,000 to 3,000 feet. The average annual precipitation is 15 to 18 inches, the average annual air temperature is 45 to 49 degrees F, and the frost-free season at 32 degrees is 100 to 140 days.

Typical pedon of Dragoon fine sandy loam, 30 to 60 percent slopes, 1,640 feet north and 2,640 feet east of the southwest corner of sec. 12, T. 26 N., R. 19 E.

A—0 to 8 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; common fine and medium interstitial pores; 5 percent pebbles; neutral; clear wavy boundary.

Bt1—8 to 16 inches; pale brown (10YR 6/3) loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine and very fine roots; few faint clay films on faces of peds; 10 percent pebbles; neutral; gradual wavy boundary.

Bt2—16 to 24 inches; light brownish gray (10YR 6/2) loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine and very fine roots; few faint clay films on faces of peds; 10 percent pebbles; neutral; abrupt wavy boundary.

2Cr—24 to 34 inches; weathered granite; massive, but breaks into fine pebbles and coarse sand.

Thickness of the solum and depth to weathered bedrock are 20 to 40 inches. The profile is slightly acid or neutral throughout.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist. It is fine sandy loam or loam.

The Bt horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry and 3 or 4 moist. It is silt loam, loam, or clay loam.

The 2C horizon, where present, breaks to very gravelly or gravelly loamy sand or sandy loam.

Entiat Series

The Entiat series consists of shallow, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from granodiorite or gneiss mixed with volcanic ash and loess. Slope is 30 to 75 percent. Elevation is 1,800 to 2,500 feet. The average annual precipitation is 10 to 14 inches, the average annual air temperature is 50 to 53 degrees F, and the frost-free season at 32 degrees is 135 to 165 days.

Typical pedon of Entiat gravelly fine sandy loam, 30 to 75 percent slopes, 1,900 feet north and 500 feet east of the southwest corner of sec. 27, T. 24 N., R. 19 E.

A—0 to 4 inches; brown (10YR 5/3) gravelly fine sandy loam, dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine roots; many fine and very fine tubular pores; 25 percent pebbles; neutral; gradual smooth boundary.

AB—4 to 10 inches; brown (10YR 5/3) very gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine roots; common very fine tubular pores; 35 percent pebbles; slightly alkaline; clear wavy boundary.

Bw—10 to 15 inches; yellowish brown (10YR 5/4) very gravelly sandy loam, brown (10YR 4/3) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine roots; common fine and medium tubular pores; 50 percent pebbles; slightly alkaline; abrupt wavy boundary.

Cr—15 to 25 inches; weathered gneiss.

The particle-size control section is 35 to 60 percent rock fragments. Depth to weathered bedrock is 12 to 20 inches. The profile is neutral or slightly alkaline.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist.

The AB horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist. It is gravelly fine sandy loam, very gravelly fine sandy loam, very gravelly loam, or very gravelly sandy loam.

The Bw horizon has value of 4 to 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is very gravelly sandy loam, very gravelly loam, or very gravelly fine sandy loam.

Entic Haplumbrepts

Entic Haplumbrepts consists of moderately deep to very deep, somewhat excessively drained soils in avalanche chutes on mountainsides and fans. These soils formed in recent alluvium and colluvium. Slope is 30 to 75 percent. Elevation is 2,200 to 5,000 feet. The average annual precipitation is 40 to 65 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 80 to 130 days.

Reference pedon of Entic Haplumbrepts, 30 to 75 percent slopes, 500 feet east and 400 feet north of the southwest corner of sec. 3, T. 26 N., R. 15 E.

A—0 to 3 inches; very dark grayish brown (10YR 3/2) very cobbly sandy loam, black (10YR 2/1) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium and few coarse roots; 10 percent pebbles, 15 percent cobbles, and 10 percent stones; 5 percent surface cobbles, stones, and boulders; moderately acid; abrupt wavy boundary.

AC—3 to 19 inches; brown (10YR 5/3) extremely stony sandy loam, very dark grayish brown (10YR 3/2) moist; massive; soft, very friable, nonsticky and nonplastic; many fine, common medium, and few coarse roots; 15 percent pebbles, 25 percent cobbles, and 25 percent stones; slightly acid; clear wavy boundary.

2C—19 to 60 inches; multicolored extremely stony coarse sand; single grain; loose; 25 percent pebbles, 25 percent cobbles, and 25 percent stones; slightly acid.

Depth to unweathered bedrock is 20 to 60 inches or more. The particle-size control section is more than 35 percent rock fragments. The profile is slightly acid or moderately acid.

The A horizon has value of 3 or 4 dry and chroma of 1 or 2 dry or moist.

The AC horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist. It is extremely stony sandy loam or very cobbly sandy loam.

The 2C horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist. It is extremely stony coarse sand, very cobbly loamy sand, or very stony sandy loam.

Esmeralda Series

The Esmeralda series consists of very deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from serpentine, gabbro, and diabase mixed with volcanic ash. Slope is 30 to 75 percent. Elevation is 4,200 to 6,300 feet. The average annual precipitation is 55 to 75 inches, the average annual air temperature is 38 to 40 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Esmeralda bouldery sandy loam, 30 to 60 percent slopes, 2,640 feet south and 1,320 feet east of the northwest corner of sec. 25, T. 23 N., R. 15 E.

Oi and Oe—4 inches to 0; needles, twigs, and partially decomposed forest litter.

A1—0 to 4 inches; light brownish gray (10YR 6/2) bouldery sandy loam, dark brown (10YR 4/3) moist; weak fine granular structure; soft, friable, nonsticky and nonplastic; common very fine roots; few fine tubular pores; 1 to 2 percent surface boulders and stones; strongly acid; gradual wavy boundary.

A2—4 to 6 inches; brown (10YR 5/3) cobbly sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine granular structure; soft, friable, nonsticky and nonplastic; common very fine and fine roots; common fine and medium tubular pores; 5 percent pebbles and 10 percent cobbles; strongly acid; gradual wavy boundary.

Bs—6 to 12 inches; reddish yellow (7.5YR 6/6) cobbly loam, strong brown (7.5YR 4/6) moist; moderate medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; common fine and medium roots; few very fine and fine tubular pores; 10 percent pebbles and 20 percent cobbles; strongly acid; abrupt wavy boundary.

Bw1—12 to 23 inches; yellowish brown (10YR 5/4) very cobbly loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; few very fine and fine roots; few fine tubular pores; 20 percent pebbles and 20 percent cobbles; strongly acid; clear wavy boundary.

Bw2—23 to 35 inches; brown (10YR 5/3) very cobbly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; weakly smeary; few very fine and fine roots; few fine tubular pores; 20 percent pebbles and 35 percent cobbles; moderately acid; clear wavy boundary.

2C—35 to 60 inches; grayish brown (10YR 5/2) extremely cobbly sandy loam, dark yellowish brown (10YR 3/4) moist; massive; loose, nonsticky and nonplastic; few fine tubular pores; 30 percent pebbles and 40 percent cobbles; moderately acid.

The particle-size control section averages 40 to 70 percent rock fragments. The profile is strongly acid or moderately acid.

The A horizon has value of 4 to 6 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry or moist.

The Bs horizon has hue of 7.5YR or 10YR and chroma of 3 to 5 dry or moist. It is cobbly loam or cobbly sandy loam.

The Bw horizon has value of 5 or 6 dry and chroma of 3 or 4 dry or moist. It is very cobbly loam, very cobbly sandy loam, or extremely cobbly sandy loam.

The 2C horizon has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 2 to 4 dry or moist. It is extremely cobbly sandy loam, extremely gravelly sandy loam, or very cobbly sandy loam.

Fears Series

The Fears series consists of very deep, well drained soils on mountainsides. These soils formed in volcanic ash and pumice mixed with colluvium derived from granitic rock. Slope is 30 to 60 percent. Elevation is 4,800 to 6,900 feet. The average annual precipitation is 35 to 55 inches, the average annual air temperature is 40 to 42 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Fears stony fine sandy loam, 30 to 60 percent slopes, 2,000 feet east and 600 feet north of the southwest corner of sec. 9, T. 30 N., R. 20 E.

Oi—1 inch to 0; undecomposed forest litter.

A—0 to 1 inch; gray (10YR 5/1) stony fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; common fine tubular pores; 5 percent pebbles, 5 percent cobbles, and 5 percent stones; 1 to 3 percent surface stones and boulders; slightly acid; abrupt wavy boundary.

C—1 to 2 inches; light gray (10YR 7/2) loamy fine sand, grayish brown (10YR 5/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; common fine and very fine tubular pores; 5 percent pebbles; moderately acid; abrupt wavy boundary.

Bw1—2 to 4 inches; brown (10YR 5/3) cobbly fine sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; many fine and medium roots; common fine tubular pores; 10 percent pebbles, 5 percent cobbles, 5 percent stones, and 10 percent pumice; slightly acid; clear wavy boundary.

Bw2—4 to 10 inches; yellowish brown (10YR 5/4) cobbly fine sandy loam, yellowish brown (10YR 5/6) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; weakly smeary; many fine and medium roots; common fine tubular pores; 10 percent pebbles, 5 percent cobbles, 5 percent stones, and 10 percent pumice; slightly acid; gradual wavy boundary.

Bw3—10 to 20 inches; brown (10YR 5/3) very cobbly fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; common fine and medium roots;

common fine tubular pores; 20 percent pebbles, 10 percent cobbles, 10 percent stones, 5 percent boulders, and 10 percent pumice; moderately acid; gradual wavy boundary.

C1—20 to 32 inches; light yellowish brown (10YR 6/4) extremely gravelly coarse sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; 45 percent pebbles, 20 percent cobbles, 10 percent stones, 5 percent boulders, and 10 percent pumice; moderately acid; gradual wavy boundary.

C2—32 to 60 inches; yellow (10YR 8/6) extremely gravelly sandy loam, yellow (10YR 7/6) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; 50 percent pebbles, 20 percent cobbles, 5 percent stones, and 5 percent pumice; moderately acid.

The particle-size control section is 35 to 80 percent rock fragments. The profile is 5 to 10 percent pumice. Some pedons do not have an A horizon.

The A horizon has value of 5 to 6 dry and chroma of 1 to 3 dry or moist. It is moderately acid or slightly acid.

The C horizon has value of 6 or 7 dry and 4 to 6 moist, and it has chroma of 2 or 3 dry or moist. It is loamy fine sand, stony fine sandy loam, or fine sandy loam. It is moderately acid or slightly acid.

The Bw1 horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 2 to 4 dry or moist. It is cobbly fine sandy loam, stony fine sandy loam, gravelly fine sandy loam, or loam. It is slightly acid or neutral.

The Bw2 and Bw3 horizons have value of 5 or 6 dry and 4 or 5 moist, and they have chroma of 3 or 4 dry and 3 to 6 moist. They are cobbly fine sandy loam, very gravelly fine sandy loam, very cobbly fine sandy loam, or gravelly fine sandy loam. They are moderately acid to neutral.

The C horizon has value of 5 to 8 dry and 4 to 7 moist, and it has chroma of 4 to 7 dry and 2 to 6 moist. It is extremely gravelly coarse sandy loam, extremely gravelly sandy loam, extremely cobbly loamy sand, or extremely gravelly loamy sand. It is moderately acid to neutral.

Fernow Series

The Fernow series consists of very deep, well drained soils on mountainsides and glaciated valleys. These soils formed in volcanic ash and pumice. Slope is 3 to 60 percent. Elevation is 3,000 to 6,000 feet. The average annual precipitation is 75 to 100 inches, the average annual air temperature is 40 to 42 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Fernow loam, 30 to 60 percent slopes, 1,050 feet west and 700 feet south of the northeast corner of sec. 9, T. 29 N., R. 16 E.

Oi—2 inches to 1 inch; undecomposed forest litter.

Oe—1 inch to 0; partially decomposed organic matter.

E—0 to 1 inch; light brownish gray (10YR 6/2) sandy loam, dark grayish brown (10YR 4/2) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; weakly smeary; common very fine and medium roots; few fine tubular pores; very strongly acid; gradual wavy boundary.

Bhs—1 to 5 inches; reddish brown (5YR 4/4) loam, dark reddish brown (5YR 3/3) moist; 10 percent reddish brown (5YR 4/3) stains of organic matter, dark reddish brown (5YR 3/2) moist; moderate fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; moderately smeary; common very fine and fine roots; few fine tubular pores; 5 percent pumice (2 to 10 millimeters in size); strongly acid; gradual irregular boundary.

Bs—5 to 10 inches; strong brown (7.5YR 5/6) loam, strong brown (7.5YR 4/6) moist;

moderate fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; moderately smeary; common fine roots; few fine tubular pores; 10 percent pumice (2 to 10 millimeters in size); moderately acid; gradual irregular boundary.

Bw—10 to 27 inches; very pale brown (10YR 7/4) loam, brown (10YR 5/3) moist; 40 percent yellow (10YR 7/6) iron stains, yellowish brown (10YR 5/6) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; weakly smeary; common very fine roots; few very fine tubular pores; moderately acid; abrupt smooth boundary.

2C1—27 to 34 inches; light yellowish brown (10YR 6/4) very cindery loam, dark yellowish brown (10YR 4/4) moist; single grain; loose; few very fine roots; 50 percent pumice (2 to 25 millimeters in size); moderately acid; clear wavy boundary.

2C2—34 to 46 inches; very pale brown (10YR 7/4) extremely cindery sandy loam, dark yellowish brown (10YR 4/4) moist; 20 percent reddish yellow (7.5YR 7/6) iron stains, strong brown (7.5YR 5/6) moist; single grain; loose; 85 percent pumice (2 to 25 millimeters in size); slightly acid; abrupt wavy boundary.

3C3—46 to 60 inches; very pale brown and white (10YR 8/4 and 10YR 8/2) cinders, yellowish brown and grayish brown (10YR 5/4 and 10YR 5/2) moist; 10 percent yellow (10YR 7/6) iron stains, brownish yellow (10YR 6/6) moist; single grain; loose; 95 percent pumice (2 to 25 millimeters in size), voids not filled; slightly acid.

The upper part of the particle-size control section averages 0 to 25 percent pumice, and the lower part averages 35 to 75 percent pumice. Depth to cinders is 40 to 60 inches.

The E horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 1 to 3 dry and 2 or 3 moist. The horizon is 0 to 10 percent pumice (2 to 10 millimeters in size). It is very strongly acid to moderately acid.

The Bhs horizon has value of 4 or 5 dry and 3 or 4 moist, and it has chroma of 2 to 4 moist or dry. The horizon is 0 to 10 percent pumice (2 to 10 millimeters in size). It is very strongly acid to moderately acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 4 to 6 moist or dry. It is loam or sandy loam. The horizon is 0 to 10 percent pumice (2 to 10 millimeters in size). It is moderately acid or slightly acid.

The Bw horizon has hue of 7.5YR or 10YR, value of 5 to 7 dry and 3 to 5 moist, and chroma of 3 to 6 moist or dry. It is loam or sandy loam. The horizon is 0 to 20 percent pumice (2 to 10 millimeters in size). It is moderately acid or slightly acid.

The 2C1 and 2C2 horizons have hue of 7.5YR or 10YR, value of 6 or 7 dry and 4 or 5 moist, and chroma of 4 to 6 moist or dry. They are loam, sandy loam, or loamy sand. The horizons are 50 to 85 percent pumice (2 to 25 millimeters in size). They are moderately acid or slightly acid.

The 3C3 horizon has hue of 7.5YR or 10YR, value of 6 to 8 dry and 4 to 6 moist, and chroma of 2 to 6 moist or dry. It averages 80 to 95 percent pumice (2 to 25 millimeters in size). It is moderately acid or slightly acid.

Fluvaquents

Fluvaquents consists of very deep, very poorly drained and poorly drained soils on flood plains. These soils formed in recent alluvium. Slope is 0 to 2 percent. Elevation is 1,600 to 2,000 feet. The average annual precipitation is 25 to 50 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Reference pedon of Fluvaquents, nearly level, 150 feet west and 250 feet south of the northeast corner of sec. 15, T. 27 N., R. 15 E.

A—0 to 3 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; few fine faint yellowish brown (10YR 5/6) mottles, strong brown (7.5YR 4/6) moist; moderate medium granular structure; slightly hard, friable, nonsticky and nonplastic; many very fine and fine and few medium roots; few very fine tubular pores; slightly acid; abrupt smooth boundary.

Cg1—3 to 16 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (2.5Y 4/2) moist; many medium distinct yellowish brown (10YR 5/6) mottles, strong brown (7.5YR 4/6) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; few very fine tubular pores; neutral; clear smooth boundary.

Cg2—16 to 23 inches; grayish brown (2.5Y 5/2) loamy fine sand, dark grayish brown (2.5Y 4/2) moist; common medium distinct yellowish brown (10YR 5/6) mottles, strong brown (7.5YR 4/6) moist; massive; soft, very friable, nonsticky and nonplastic; few fine and coarse roots; few very fine tubular pores; neutral; abrupt smooth boundary.

Cg3—23 to 29 inches; gray (5Y 6/1) sand, dark gray (5Y 4/1) moist; single grain; loose, nonsticky and nonplastic; few fine and medium roots; few very fine tubular pores; neutral; abrupt smooth boundary.

C4g—29 to 60 inches; gray (5Y 6/1) stratified sand to very fine sandy loam, dark gray (5Y 4/1) moist; common medium distinct yellowish brown (10YR 5/4) mottles, dark brown (7.5YR 3/4) moist; single grain and massive; soft, very friable, nonsticky and nonplastic; few fine and medium roots; few very fine tubular pores; neutral.

The profile is 0 to 20 percent rock fragments. It is slightly acid or neutral.

The A horizon has value of 5 or 6 dry and chroma of 1 or 2 dry and 2 to 6 moist. It is silt loam or loam.

The C horizon has hue of 10YR, 2.5Y, or 5Y, value of 5 or 6 dry, and chroma of 1 or 2 dry and 2 to 8 moist. The upper part is silt loam, loam, loamy fine sand, sand, very fine sandy loam, or gravelly very fine sandy loam, and the lower part is stratified sand to gravelly very fine sandy loam.

An apparent water table is present in November through June. It is at its highest level (0.5 foot above the surface to a depth of 0.3 foot below the surface) in February and March. Brief periods of ponding occur in February and March. Frequent, long periods of flooding occur in November through March.

Georgecreek Series

The Georgecreek series consists of deep, well drained soils on mountainsides and ridgetops. These soils formed in residuum and colluvium derived from granitic rock mixed with loess and volcanic ash in the upper part. Slope is 3 to 60 percent. Elevation is 2,000 to 3,000 feet. The average annual precipitation is 15 to 20 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 100 to 130 days.

Typical pedon of Georgecreek fine sandy loam, 30 to 60 percent slopes, 1,200 feet south and 1,000 feet east of the northwest corner of sec. 32, T. 26 N., R. 20 E.

A1—0 to 3 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; common fine tubular pores; neutral; clear smooth boundary.

A2—3 to 10 inches; brown (10YR 5/3) fine sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, firm, nonsticky and nonplastic; many fine and medium roots; common medium and coarse tubular pores; neutral; clear wavy boundary.

Bt—10 to 18 inches; light yellowish brown (10YR 6/4) sandy clay loam, dark brown (10YR 4/3) moist; weak medium prismatic structure; hard, very firm, sticky and plastic; common fine roots; common fine and medium tubular pores; few faint clay films on faces of peds; neutral; gradual wavy boundary.

BCt—18 to 42 inches; yellowish brown (10YR 5/6) sandy clay loam, yellowish brown (10YR 5/4) moist; weak coarse prismatic structure; very hard, very firm, sticky and plastic; few fine roots; common fine and medium tubular pores; few faint clay films on faces of peds; neutral; gradual wavy boundary.

Cr—42 to 52 inches; weathered granodiorite.

Depth to weathered bedrock is 40 to 60 inches. The profile is slightly acid to slightly alkaline. The particle-size control section is 0 to 5 percent rock fragments.

The A horizon has chroma of 2 or 3 dry or moist.

The Bt and BCt horizons have value of 5 or 6 dry and 4 or 5 moist, and they have chroma of 4 to 6 dry and 3 or 4 moist. They are sandy clay loam, clay loam, or gravelly loam.

Gilpar Series

The Gilpar series consists of very deep, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from metamorphic and igneous rock mixed with volcanic ash. Slope is 30 to 90 percent. Elevation is 2,100 to 5,500 feet. The average annual precipitation is 70 to 90 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 110 days.

Typical pedon of Gilpar very stony sandy loam, 30 to 60 percent slopes, 1,770 feet east and 310 feet south of the northwest corner of sec. 9, T. 27 N., R. 15 E.

Oi—1 inch to 0; duff and partially decomposed forest litter.

E—0 to 1 inch; light brownish gray (10YR 6/2) very stony sandy loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and few fine roots; few fine tubular pores; 40 percent channers and 10 percent stones; 5 to 10 percent surface stones; moderately acid; abrupt wavy boundary.

Bs1—1 to 6 inches; pink (7.5YR 7/4) very channery sandy loam, dark brown (7.5YR 3/4) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; weakly smeary; common very fine and fine and few medium roots; common fine and very fine tubular pores; 30 percent channers and 10 percent stones; moderately acid; gradual wavy boundary.

Bs2—6 to 20 inches; light brown (7.5YR 6/4) very channery sandy loam, dark brown (7.5YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; many very fine, fine, and medium roots; common fine tubular pores; 40 percent channers and 10 percent stones; moderately acid; gradual wavy boundary.

Bw—20 to 28 inches; light yellowish brown (10YR 6/4) very channery sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; many very fine and fine and few medium and coarse roots; common fine tubular pores; 40 percent channers, 10 percent cobbles, and 5 percent stones; slightly acid; clear wavy boundary.

BC—28 to 60 inches; light yellowish brown (2.5Y 6/4) very channery sandy loam, olive brown (2.5Y 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; common very fine, fine, medium, and coarse roots; few fine tubular pores; 40 percent channers, 10 percent cobbles, and 5 percent stones; slightly acid.

The particle-size control section is 40 to 60 percent rock fragments.

The E horizon has value of 4 to 6 moist. It is strongly acid or moderately acid. The E horizon is absent in some pedons.

The Bs horizon has hue of 5YR or 7.5YR, value of 5 to 7 dry and 3 or 4 moist, and chroma of 3 or 4 dry or moist. It is very channery sandy loam or very gravelly sandy loam. The horizon is strongly acid to slightly acid.

The Bw horizon has hue of 10YR or 7.5YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 3 to 6 moist or dry. It is very cobbly loam, very gravelly loam, very gravelly sandy loam, very channery sandy loam, or extremely gravelly sandy loam. It is strongly acid or moderately acid.

The BC horizon has hue of 2.5Y or 10YR, value of 4 or 5 moist, and chroma of 3 or 4 moist or dry. It is very cobbly loam, extremely gravelly sandy loam, very gravelly sandy loam, or very channery sandy loam. It is moderately acid or slightly acid.

Goffpeak Series

The Goffpeak series consists of deep, well drained soils on mountainsides. These soils formed in volcanic ash and pumice over granitic and volcanic rock. Slope is 30 to 60 percent. Elevation is 4,800 to 6,000 feet. The average annual precipitation is 30 to 50 inches, the average annual air temperature is 39 to 41 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Goffpeak cindery sandy loam, 30 to 60 percent slopes, 1,800 feet west and 100 feet north of the southeast corner of sec. 10, T. 27 N., R. 20 E.

Oi—0.5 inch to 0; undecomposed forest litter.

E—0 to 0.5 inch; light gray (10YR 7/2) fine sandy loam, grayish brown (10YR 5/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common fine roots; few very fine tubular pores; 10 percent pumice; slightly acid; abrupt smooth boundary.

Bw1—-0.5 inch to 13 inches; pale brown (10YR 6/3) cindery sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; few very fine tubular pores; 15 percent pumice; slightly acid; gradual wavy boundary.

Bw2—13 to 26 inches; pale brown (10YR 6/3) cindery sandy loam, dark brown (10YR 4/3) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; few very fine tubular pores; 15 percent pumice; slightly acid; clear wavy boundary.

C—26 to 42 inches; yellow (10YR 7/6), white (10YR 8/1), and black (10YR 2/1) very cindery sandy loam, brownish yellow (10YR 6/6), light gray (10YR 7/2), and black (10YR 2/1) moist; single grain; loose; few fine roots; 50 percent pumice; neutral; abrupt wavy boundary.

2R—42 to 46 inches; fractured unweathered granite.

Depth to unweathered bedrock is 40 to 60 inches. The upper part of the particle-size control section is 5 to 35 percent pumice, and the lower part is 35 to 75 percent pumice. The profile is slightly acid or neutral.

The E horizon has value of 5 to 7 moist and chroma of 1 or 2 dry or moist.

The Bw horizon has hue of 7.5YR or 10YR, value of 3 to 5 moist, and chroma of 1 to 3 dry and 2 to 6 moist. It is cindery sandy loam, cindery fine sandy loam, cindery coarse sandy loam, or cindery loamy sand.

The C horizon has hue of 2.5Y or 10YR, value of 5 to 8 moist, and chroma of 4 to 6 dry and 1 to 6 moist. It is very cindery sandy loam, extremely cindery sandy loam, or extremely cindery fine sandy loam.

Haplocryods

Haplocryods consists of moderately deep to very deep, well drained soils on mountainsides and ridge crests. These soils formed in volcanic ash mixed with glacial till or colluvium and residuum derived from igneous and metamorphic rock. Slope is 8 to 90 percent. Elevation is 2,500 to 8,000 feet. The average annual precipitation is 35 to 120 inches, the average annual air temperature is 35 to 42 degrees F, and the frost-free season at 32 degrees is 30 to 90 days.

Reference pedon of Haplocryods in an area of Haplocryods complex, gently sloping to steep, 1,400 feet north and 2,215 feet east of the southwest corner of sec. 14, T. 33 N., R. 15 E.

Oi—2 inches to 1 inch; undecomposed forest litter.

Oe—1 inch to 0; decomposed organic matter.

E—0 to 2 inches; light brownish gray (10YR 6/2) loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; weakly smeary; many very fine and fine and few medium and coarse roots; 10 percent pebbles and 1 percent stones; moderately acid; abrupt smooth boundary.

Bs1—2 to 6 inches; brown (7.5YR 5/4) loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; weakly smeary; many very fine and fine and few medium and coarse roots; 10 percent pebbles; moderately acid; clear wavy boundary.

Bs2—6 to 15 inches; light brown (7.5YR 6/4) gravelly sandy loam, dark brown (7.5YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; weakly smeary; common very fine and fine and few medium and coarse roots; 30 percent pebbles; slightly acid; clear wavy boundary.

BC—15 to 29 inches; light olive brown (2.5Y 5/4) very gravelly sandy loam, olive brown (2.5Y 4/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; common very fine and fine and few medium roots; 30 percent pebbles and 5 percent cobbles; slightly acid; clear wavy boundary.

C—29 to 52 inches; light yellowish brown (2.5Y 6/4) very gravelly sandy loam, light olive brown (2.5Y 5/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; few fine and medium roots; 40 percent pebbles and 10 percent cobbles; slightly acid; abrupt wavy boundary.

R—52 to 56 inches; fractured unweathered granodiorite.

Depth to unweathered bedrock is 20 to 60 inches or more. The particle-size control section averages 20 to 60 percent rock fragments.

The E horizon has hue of 5YR, 7.5YR, or 10YR, value of 3 to 8 dry and 4 to 6 moist, and chroma of 1 to 3 moist or dry. It is silt loam, loam, sandy loam, or loamy sand and is 0 to 20 percent rock fragments. Content of surface stones is 0 to 3 percent. The horizon is strongly acid to neutral.

The Bs horizon has hue of 5YR or 7.5YR, value of 4 to 6 dry and 3 to 5 moist, and chroma of 3 to 6 moist or dry. It is silt loam, loam, fine sandy loam, or sandy loam and is 5 to 40 percent rock fragments. The horizon is moderately acid or slightly acid.

The BC horizon has hue of 10YR, 7.5YR, or 2.5Y, value of 5 to 7 dry and 3 to 6 moist, and chroma of 3 to 6 moist or dry. It is loam, sandy loam, or loamy sand and is 15 to 60 percent rock fragments. The horizon is moderately acid or slightly acid.

The C horizon has hue of 10YR, 2.5Y, or 5Y, value of 4 to 7 dry and 3 to 6 moist, and chroma of 2 to 6 moist or dry. It is loam, sandy loam, or loamy sand and is 20 to 70 percent rock fragments. The horizon is moderately acid or slightly acid.

Haploxerolls

Haploxerolls consists of very deep, well drained soils on terraces and terrace escarpments. These soils formed in glacial outwash and glacial lake sediment mixed with loess, volcanic ash, and pumice in the upper part. Slope is 8 to 90 percent. Elevation is 1,400 to 2,800 feet. The average annual precipitation is 15 to 25 inches, the average annual air temperature is 46 to 49 degrees F, and the frost-free season at 32 degrees is 110 to 150 days.

Reference pedon of Haploxerolls, very steep, 2,500 feet north of the southeast corner of sec. 23, T. 29 N., R. 21 E.

A—0 to 10 inches; grayish brown (10YR 5/2) very stony fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; many fine tubular pores; 20 percent pebbles, 5 percent cobbles, and 5 percent stones; 3 to 10 percent surface stones, cobbles, and boulders; neutral; gradual wavy boundary.

Bw—10 to 26 inches; light brownish gray (10YR 6/2) very stony sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and very fine roots; common fine and medium tubular pores; 25 percent pebbles, 5 percent cobbles, and 15 percent stones; neutral; diffuse wavy boundary.

C—26 to 60 inches; pale brown (10YR 6/3) extremely cobbly loamy sand, grayish brown (10YR 5/2) moist; single grain; soft, very friable, nonsticky and nonplastic; few very fine roots; common fine and medium tubular pores; 35 percent pebbles, 15 percent cobbles, 5 percent stones, and 5 percent boulders; slightly alkaline.

The particle-size control section is 10 to 85 percent rock fragments. The profile is neutral or slightly alkaline.

The A horizon has chroma of 1 or 2 dry or moist.

The Bw horizon has value of 6 or 7 dry and 3 to 5 moist, and it has chroma of 2 to 4 dry or moist. It is very fine sandy loam, very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly loam, or very stony sandy loam.

The C horizon has value of 6 or 7 dry and chroma of 2 to 4 dry or moist. It is stratified extremely cobbly loamy sand, loamy sand, extremely cobbly coarse sandy loam, very gravelly sandy loam, very cobbly sandy loam, or very fine sandy loam.

Humicryods

Humicryods consists of moderately deep to very deep, well drained soils on mountainsides. These soils formed in volcanic ash mixed with colluvium derived from many kinds of rock. Slope is 3 to 120 percent. Elevation is 4,000 to 8,000 feet. The average annual precipitation is 70 to 130 inches, the average annual air temperature is 38 to 43 degrees F, and the frost-free season at 32 degrees is 50 to 80 days.

Reference pedon of Humicryods in an area of Humicryods-Andic Cryochrepts-Rock outcrop complex, steep and very steep, 1,600 feet north and 1,700 feet west of the southeast corner of sec. 13, T. 16 N., R. 13 E.

Oi—3 to 2 inches; undecomposed forest litter.

Oe—2 inches to 0; partially decomposed forest litter.

E—0 to 2 inches; gray (7.5YR 6/1) bouldery loamy sand, dark brown (7.5YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; few very fine tubular pores; 5 percent pebbles and 1 to 3 percent surface boulders and stones; very strongly acid; clear wavy boundary.

Bhs1—2 to 5 inches; dark reddish brown (5YR 3/2) and dark brown (7.5YR 4/4) fine sandy loam, very dark grayish brown (2.5Y 3/2) and yellowish red (5YR 4/6) moist; moderate medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; common fine and medium roots; few very fine tubular pores; 5 percent pebbles; strongly acid; gradual wavy boundary.

Bhs2—5 to 10 inches; strong brown (7.5YR 5/6) and dark brown (7.5YR 3/4) fine sandy loam, strong brown (7.5YR 4/6) and dark reddish brown (5YR 3/3) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; common fine and medium roots; few very fine tubular pores; 5 percent pebbles; moderately acid; gradual wavy boundary.

BC—10 to 20 inches; light yellowish brown (10YR 6/4) very cobbly sandy loam, dark yellowish brown (10YR 4/6) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; weakly smeary; few fine roots; few very fine tubular pores; 10 percent pebbles, 20 percent cobbles, and 10 percent stones; moderately acid; clear irregular boundary.

C—20 to 39 inches; light yellowish brown (10YR 6/4) very cobbly loamy coarse sand, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; weakly smeary; few very fine tubular pores; 10 percent pebbles, 25 percent cobbles, and 15 percent stones; moderately acid; abrupt wavy boundary.

Cr—39 to 49 inches; weathered granodiorite.

The profile is very strongly acid to moderately acid. Depth to weathered bedrock is 20 to 60 inches or more. The content of rock fragments is 5 to 60 percent.

The E horizon has hue of 7.5YR or 5YR, value of 5 or 6 dry, and chroma of 1 to 3 dry and 2 or 3 moist.

The Bhs horizon has hue of 5YR, 7.5YR, or 2.5YR, value of 3 to 5 dry and 3 or 4 moist, and chroma of 2 to 4 dry and 4 to 6 moist. It is fine sandy loam, very cobbly sandy loam, cobbly sandy loam, or cobbly loam.

The BC horizon has hue of 10YR or 7.5YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 3 or 4 dry and 4 or 5 moist. It is very cobbly loamy coarse sand, very cobbly sandy loam, or very cobbly loam.

The C horizon has hue of 10YR or 7.5YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 3 or 4 dry or moist. It is very cobbly loamy coarse sand or very cobbly sandy loam.

Hyprairie Series

The Hyprairie series consists of very deep, well drained soils on mountainsides. These soils formed in weathered sandstone mixed with loess in the upper part. Slope is 25 to 65 percent. Elevation is 2,000 to 3,400 feet. The average annual precipitation is 18 to 20 inches, the average annual air temperature is 46 to 48 degrees F, and the frost-free season at 32 degrees is 110 to 140 days.

Typical pedon of Hyprairie silt loam, 25 to 45 percent slopes, 1,700 feet south of the northeast corner of sec. 8, T. 24 N., R. 19 E.

A1—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium granular structure; soft, friable, nonsticky and nonplastic; many fine and medium roots; few fine interstitial pores; neutral; gradual wavy boundary.

A2—6 to 22 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; common fine roots; few fine interstitial pores; neutral; gradual wavy boundary.

Bt1—22 to 41 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, very firm, sticky and plastic; few fine roots; common medium interstitial pores; neutral; gradual wavy boundary.

Bt2—41 to 60 inches; light yellowish brown (10YR 6/4) silty clay loam, yellowish brown (10YR 5/4) moist; massive; hard, very firm, sticky and plastic; few fine roots; few fine tubular pores; 10 percent weathered pebbles and cobbles and 5 percent unweathered pebbles; neutral.

The particle-size control section averages 27 to 35 percent clay and 0 to 15 percent unweathered rock fragments.

The A horizon has value of 4 or 5 dry and chroma of 2 to 3 dry or moist.

The Bt horizon has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 3 or 4 dry or moist. It is silty clay loam or clay loam and may be as much as 15 percent unweathered rock fragments.

Icicle Series

The Icicle series consists of deep and very deep, well drained soils on mountainsides. These soils formed in colluvium derived from granite and granodiorite or glacial till mixed with volcanic ash and loess. Slope is 3 to 90 percent. Elevation is 1,500 to 5,000 feet. The average annual precipitation is 28 to 50 inches, the average annual air temperature is 42 to 45 degrees F, and the frost-free season at 32 degrees is 100 to 130 days.

Typical pedon of Icicle bouldery sandy loam, 30 to 60 percent slopes, 2,500 feet west and 2,300 feet north of the southeast corner of sec. 2, T. 24 N., R. 16 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 5 inches; grayish brown (10YR 5/2) bouldery sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; common fine tubular pores; 5 percent pebbles, 5 percent cobbles, and 5 percent stones; 2 percent surface boulders; neutral; clear wavy boundary.

Bw1—5 to 13 inches; yellowish brown (10YR 5/4) very cobbly sandy loam, dark yellowish brown (10YR 3/4) moist; weak fine subangular blocky structure; soft, friable, nonsticky and nonplastic; common fine and very fine roots; few fine tubular and interstitial pores; 15 percent pebbles, 20 percent cobbles, and 5 percent stones; neutral; clear wavy boundary.

Bw2—13 to 24 inches; yellowish brown (10YR 5/4) very cobbly sandy loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and very fine roots; few fine tubular and interstitial pores; 20 percent pebbles, 20 percent cobbles, and 5 percent stones; slightly acid; gradual wavy boundary.

C—24 to 60 inches; pale brown (10YR 6/3) extremely stony sandy loam, dark brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; few fine and very fine roots; few fine tubular pores; 10 percent pebbles, 15 percent cobbles, and 35 percent stones; slightly acid.

The particle-size control section is 50 to 75 percent rock fragments. Depth to unweathered bedrock is 40 to 60 inches or more. The profile is slightly acid or neutral.

The A horizon has value of 4 to 6 dry and 2 or 3 moist, and it has chroma of 1 to 3 dry or moist. It is stony fine sandy loam, bouldery sandy loam, or very bouldery sandy loam.

The Bw horizon has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 2 to

4 dry or moist. It is extremely stony, very stony, extremely cobbly, very gravelly, or very cobbly sandy loam or loam.

The C horizon has value of 6 or 7 dry and 4 to 6 moist, and it has chroma of 2 to 4 dry or moist. It is very stony, extremely stony, very cobbly, or extremely cobbly sandy loam.

Inkler Series

The Inkler series consists of deep, well drained soils on mountainsides. These soils formed in colluvium derived from gneiss and schist with a mantle of volcanic ash. Slope is 30 to 75 percent. Elevation is 2,500 to 5,000 feet. The average annual precipitation is 30 to 35 inches, the average annual air temperature is 41 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 110 days.

Typical pedon of Inkler stony fine sandy loam, 30 to 60 percent slopes, 800 feet west and 2,600 feet north of the southwest corner of sec. 5, T. 25 N., R. 19 E.

A—0 to 4 inches; grayish brown (10YR 5/2) stony fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; many very fine tubular pores; 15 percent pebbles, 10 percent cobbles, and 2 percent stones; 2 percent surface stones; slightly acid; clear wavy boundary.

BA—4 to 10 inches; pale brown (10YR 6/3) very cobbly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine and fine tubular pores; 15 percent pebbles, 15 percent cobbles, and 10 percent stones; neutral; clear wavy boundary.

Bw—10 to 29 inches; light yellowish brown (10YR 6/4) very stony sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine, medium, and coarse roots; common very fine and fine tubular pores; 20 percent pebbles, 15 percent cobbles, and 20 percent stones; neutral; gradual wavy boundary.

C—29 to 44 inches; pale brown (10YR 6/3) extremely cobbly sandy loam, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine, medium, and coarse roots; few fine tubular pores; 30 percent pebbles, 25 percent cobbles, and 20 percent stones; neutral; abrupt irregular boundary.

R—44 to 48 inches; fractured unweathered gneiss.

The particle-size control section averages 35 to 60 percent rock fragments. Depth to unweathered bedrock is 40 to 60 inches. The profile is slightly acid or neutral.

The A horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist.

The BA horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is very gravelly fine sandy loam or very cobbly sandy loam.

The Bw horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is very cobbly fine sandy loam or very stony sandy loam.

The C horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry or moist. It is extremely cobbly fine sandy loam or extremely cobbly sandy loam.

Isella Series

The Isella series consists of very deep, well drained soils on mountainsides and in cirque basins. These soils formed in volcanic ash. Slope is 3 to 60 percent. Elevation is 4,000 to 6,000 feet. The average annual precipitation is 80 to 120 inches, the average annual air temperature is 38 to 42 degrees F, and the frost-free season at 32 degrees F is 50 to 80 days.

Typical pedon of Isella loam in an area of Isella-Fernow association, 3 to 30 percent slopes, 2,500 feet east and 2,600 feet north of the southwest corner of sec. 7, T. 31 N., R. 16 E.

Oi—3 to 2 inches; undecomposed forest litter of loose needles, twigs, and cones.

Oe—2 inches to 0; decomposed organic matter that is black (10YR 2/1) moist.

E—0 to 2 inches; pinkish gray (5YR 7/2) fine sandy loam, pinkish gray (5YR 6/2) moist; moderate fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; nonsmeary; common very fine, fine, medium, and coarse roots; common very fine tubular pores; strongly acid; abrupt wavy boundary.

Bhs—2 to 6 inches; reddish brown (5YR 5/3) loam, dark reddish brown (5YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; weakly smeary; common very fine and fine and few coarse and medium roots; common very fine tubular pores; strongly acid; clear irregular boundary.

Bs—6 to 20 inches; yellowish red (5YR 5/6) loam, yellowish red (5YR 4/6) moist; strong fine and medium subangular blocky structure; hard, firm, nonsticky and slightly plastic; weakly smeary; common fine and medium and few coarse roots; common very fine tubular pores; strongly acid; abrupt wavy boundary.

Bw—20 to 45 inches; very pale brown (10YR 7/4) fine sandy loam, yellowish brown (10YR 5/4) moist; small areas of iron stains appear as few fine prominent reddish yellow (7.5YR 6/6) mottles, strong brown (7.5YR 5/6) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; few medium roots; few very fine tubular pores; moderately acid; clear wavy boundary.

2Bsb—45 to 50 inches; yellowish brown (10YR 5/4) loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; weakly smeary; few very fine tubular pores; moderately acid; clear wavy boundary.

2Bwb—50 to 60 inches; light yellowish brown (10YR 6/4) sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; weakly smeary; few very fine tubular pores; 10 percent pebbles; moderately acid.

The particle-size control section averages 0 to 10 percent rock fragments.

The E horizon has hue of 5YR to 10YR, value of 5 to 7 dry and 3 to 5 moist, and chroma of 1 or 2 moist or dry. The horizon is strongly acid or moderately acid.

The Bhs horizon has hue of 5YR or 7.5YR, value of 4 or 5 dry and 3 or 4 moist, and chroma of 3 or 4 moist or dry. The horizon is strongly acid or moderately acid.

The Bs horizon has hue of 5YR or 7.5YR, value of 5 or 6 dry and 3 to 5 moist, and chroma of 4 to 6 moist or dry. It is loam or fine sandy loam. The horizon is strongly acid or moderately acid.

The Bw horizon has hue of 7.5YR or 10YR, value of 6 or 7 dry and 4 or 5 moist, and chroma of 3 or 4 moist or dry. It is loam, fine sandy loam, or very fine sandy loam. Some pedons do not have a Bw horizon. The horizon is moderately acid or slightly acid.

The 2Bsb horizon has hue of 5YR, 7.5YR, or 10YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 4 to 6 moist or dry. It is loam or fine sandy loam and is 0 to 10 percent rock fragments. The horizon is moderately acid or slightly acid.

The 2Bwb horizon has hue of 10YR or 2.5Y and value of 6 or 7 dry and 3 to 5 moist. It is sandy loam, gravelly loam, or gravelly sandy loam and is 10 to 25 percent rock fragments. The horizon is moderately acid or slightly acid.

Kingmont Series

The Kingmont series consists of very deep, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from serpentine mixed with volcanic ash and loess. Slope is 30 to 60 percent. Elevation is 2,200 to 4,800 feet. The average annual precipitation is 27 to 35 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 80 to 120 days.

Typical pedon of Kingmont gravelly loam, 30 to 60 percent slopes, 900 feet north and 100 feet west of the southeast corner of sec. 11, T. 22 N., R. 17 E.

Oi—0.5 inch to 0; undecomposed forest litter.

E1—0 to 14 inches; very pale brown (10YR 7/3) gravelly loam, yellowish brown (10YR 5/4) moist; weak medium granular structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; common medium tubular pores; 20 percent pebbles and 10 percent cobbles; slightly acid; gradual smooth boundary.

E2—14 to 28 inches; very pale brown (10YR 7/3) extremely gravelly loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine roots; common fine tubular pores; 55 percent pebbles and 10 percent cobbles; neutral; clear smooth boundary.

Bt1—28 to 36 inches; pale brown (10YR 6/3) extremely gravelly clay loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; very hard, extremely firm, very sticky and very plastic; common fine roots; many fine and medium tubular pores; 55 percent pebbles and 15 percent cobbles; neutral; clear smooth boundary.

Bt2—36 to 60 inches; light yellowish brown (10YR 6/4) extremely gravelly clay loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; very hard, extremely firm, very sticky and very plastic; few fine roots; few very fine and fine tubular pores; 50 percent pebbles and 15 percent cobbles; neutral.

The particle-size control section averages 35 to 40 percent clay and 60 to 75 percent rock fragments. The profile is slightly acid or neutral throughout.

The E horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 2 to 4 dry and 3 or 4 moist. It is extremely gravelly loam or very gravelly loam.

The Bt horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 2 to 4 dry and 3 to 6 moist. It is very gravelly clay loam or extremely gravelly clay loam.

Kladnick Series

The Kladnick series consists of very deep, well drained and somewhat excessively drained soils on terraces and fans. These soils formed in glacial outwash with a mantle of volcanic ash. Slope is 0 to 30 percent. Elevation is 2,000 to 2,600 feet. The average annual precipitation is 40 to 75 inches, the average annual air temperature is 42 to 45 degrees F, and the frost-free season at 32 degrees is 80 to 120 days.

Typical pedon of Kladnick cobbly fine sandy loam, 0 to 8 percent slopes, 2,000 feet east and 1,200 feet south of the northwest corner of sec. 21, T. 28 N., R. 17 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 14 inches; pale brown (10YR 6/3) cobbly fine sandy loam, brown (10YR 4/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; few fine tubular pores; 10 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral; clear smooth boundary.

2Bw—14 to 21 inches; pale brown (10YR 6/3) very gravelly loamy sand, grayish brown (10YR 5/2) moist; single grain; soft, very friable, nonsticky and nonplastic; common fine and medium roots; common fine tubular pores; 20 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; abrupt wavy boundary.

2C—21 to 60 inches; multicolored extremely cobbly sand; single grain; loose; 30 percent pebbles, 25 percent cobbles, and 10 percent stones; neutral.

Thickness of the mantle of volcanic ash is 7 to 14 inches. The profile is moderately acid to neutral.

The A horizon has hue of 7.5YR or 10YR, value of 5 or 6 dry and 4 or 5 moist, and chroma of 2 or 3 dry or moist. It is cobbly fine sandy loam, very stony sandy loam, or gravelly fine sandy loam.

The 2Bw horizon has hue of 2.5Y or 10YR, value of 5 to 7 dry and 3 to 6 moist, and chroma of 2 to 4 dry or moist. It is very gravelly loamy sand, extremely gravelly loamy sand, or very gravelly sandy loam.

The 2C horizon is very gravelly, extremely gravelly, or extremely cobbly sand, coarse sand, or loamy sand.

Klapatche Series

The Klapatche series consists of moderately deep, well drained soils on mountainsides. These soils formed in volcanic ash and pumice over colluvium and residuum derived from granodiorite. Slope is 30 to 90 percent. Elevation is 3,200 to 5,600 feet. The average annual precipitation is 70 to 90 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 70 to 90 days.

Typical pedon of Klapatche very stony loamy sand in an area of Klapatche-Altapeak association, 30 to 60 percent slopes, 2,000 feet east and 1,000 feet south of the northwest corner of sec. 23, T. 24 N., R. 14 E.

Oi—2 inches to 1 inch; undecomposed forest litter.

Oe—1 inch to 0; partially decomposed forest litter.

E—0 to 2 inches; gray (10YR 6/1) very stony loamy sand, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; few fine tubular pores; 5 percent pebbles and 30 percent stones; very strongly acid; clear wavy boundary.

Bhs—2 to 4 inches; brown (7.5YR 5/4) loamy sand, dark brown (7.5YR 3/4) moist; weak very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common medium and few very fine roots; common fine tubular pores; 5 percent pebbles; strongly acid; clear wavy boundary.

Bs—4 to 12 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark yellowish brown (10YR 4/6) moist; moderate fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common medium and coarse roots; common fine tubular pores; 20 percent pebbles and 5 percent pumice; strongly acid; clear wavy boundary.

2BC—12 to 26 inches; grayish brown (2.5Y 5/2) very cobbly loamy sand, olive brown (2.5Y 4/4) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; common fine and very fine tubular pores; 20 percent pebbles, 30 percent cobbles, and 5 percent pumice; strongly acid; abrupt wavy boundary.

2C—26 to 37 inches; reddish gray (5YR 5/2) extremely gravelly sand, reddish brown (5YR 4/3) moist; massive; loose, nonsticky and nonplastic; 40 percent pebbles and 20 percent cobbles; strongly acid; abrupt wavy boundary.

2Cr—37 to 47 inches; weathered granodiorite.

Depth to weathered bedrock is 20 to 40 inches. The particle-size control section is 35 to 65 percent rock fragments. The profile is strongly acid or moderately acid.

The E horizon has value of 6 or 7 dry and chroma of 1 or 2 dry or moist. It is very strongly acid to moderately acid.

The Bhs horizon has value of 5 or 6 dry and chroma of 3 or 4 dry or moist. It is very strongly acid to moderately acid.

The Bs horizon has value of 5 or 6 dry and chroma of 4 to 6 dry or moist. It is gravelly sandy loam or gravelly loamy sand. It is strongly acid or moderately acid.

The 2BC and 2C horizons have value of 5 or 6 dry and chroma of 2 or 3 dry or moist. They are very cobbly loamy sand, extremely gravelly sand, or very gravelly sand. They are strongly acid or moderately acid.

Kloochman Series

The Kloochman series consists of moderately deep, well drained soils on mountainsides, ridgetops, and toeslopes. These soils formed in colluvium and residuum derived from gneiss and schist mixed with a mantle of volcanic ash. Slope is 3 to 90 percent. Elevation is 2,500 to 5,000 feet. The average annual precipitation is 25 to 35 inches, the average annual air temperature is 41 to 45 degrees F, and the frost-free season at 32 degrees is 90 to 140 days.

Typical pedon of Kloochman gravelly fine sandy loam, 3 to 30 percent slopes, 2,000 feet east and 200 feet north of the southwest corner of sec. 31, T. 26 N., R. 20 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 3 inches; grayish brown (10YR 5/2) gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; common medium and fine tubular pores; 15 percent pebbles, 2 percent cobbles, and 5 percent soft pebbles; neutral; clear wavy boundary.

Bw—3 to 18 inches; brown (10YR 5/3) gravelly fine sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and very fine roots; common medium and fine tubular pores; 15 percent pebbles, 5 percent cobbles, and 5 percent soft pebbles; neutral; abrupt wavy boundary.

2C—18 to 34 inches; light yellowish brown (10YR 6/4) very channery sandy loam, yellowish brown (10YR 5/4) moist; single grain; loose; few fine roots; 45 percent channers, 10 percent flagstones, and 15 percent soft pebbles; neutral; abrupt wavy boundary.

2R—34 to 38 inches; fractured unweathered gneiss.

Depth to unweathered bedrock is 20 to 40 inches. The upper part of the particle-size control section averages 10 to 25 percent rock fragments and 0 to 10 percent soft rock fragments and the fine-earth fraction is influenced by volcanic ash. The lower part of the particle-size control section averages 35 to 65 percent rock fragments and 0 to 20 percent soft rock fragments.

The A horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 1 or 2 dry or moist. It is gravelly or flaggy fine sandy loam. It is moderately acid to neutral.

The Bw horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or

4 dry or moist. It is gravelly sandy loam, very gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam, or very cobbly sandy loam. The horizon is slightly acid or neutral.

The 2C horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 2 to 4 dry or moist. It is very channery sandy loam, extremely flaggy sandy loam, or very cobbly sandy loam. The horizon is slightly acid or neutral.

Limking Series

The Limking series consists of deep, well drained soils on mountainsides. These soils formed in volcanic ash over colluvium and residuum derived from granitic rock. Slope is 30 to 60 percent. Elevation is 2,000 to 6,000 feet. The average annual precipitation is 30 to 45 inches, the average annual air temperature is 41 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 140 days.

Typical pedon of Limking stony loam, 30 to 60 percent slopes, 1,000 feet west and 1,340 feet north of the southeast corner of sec. 1, T. 29 N., R. 21 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A1—0 to 4 inches; brown (10YR 5/3) stony loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; weakly smeary; common very fine, fine, and medium roots; few very fine tubular pores; 10 percent pebbles and 5 percent stones; 2 percent surface stones; neutral; clear wavy boundary.

A2—4 to 6 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; common very fine and fine roots; few very fine tubular pores; 10 percent pebbles; neutral; clear wavy boundary.

Bs1—6 to 13 inches; brown (7.5YR 5/4) gravelly loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; weakly smeary; many very fine and common fine roots; few very fine tubular pores; 5 percent pumice (2 to 10 millimeters in size), 15 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; clear wavy boundary.

Bs2—13 to 22 inches; light brown (7.5YR 6/4) very gravelly sandy loam, brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; weakly smeary; common very fine and fine roots; few very fine tubular pores; 5 percent pumice (2 to 10 millimeters in size), 30 percent pebbles, 10 percent cobbles, and 5 percent stones; neutral; clear wavy boundary.

2BC—22 to 44 inches; light yellowish brown (2.5Y 6/4) extremely gravelly loamy sand, olive brown (2.5Y 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; 50 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

2C—44 to 58 inches; brownish yellow (10YR 6/6) extremely gravelly loamy coarse sand, dark yellowish brown (10YR 4/6) moist; single grain; loose; 50 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral; abrupt wavy boundary.

2R—58 to 62 inches; unweathered granodiorite.

The particle-size control section averages 35 to 60 percent rock fragments. Depth to unweathered bedrock is 40 to 60 inches. The profile is slightly acid or neutral.

The A horizon has value of 5 or 7 dry and chroma of 1 to 3 dry or moist. About 1 to 3 percent of the surface is covered with stones. The horizon is fine sandy loam, loam, or gravelly loam. It is 5 to 20 percent rock fragments.

The Bs horizon has hue of 7.5YR or 10YR, value of 5 or 6 dry and 3 to 5 moist, and chroma of 4 to 6 moist or dry. It is gravelly loam, very gravelly loam, gravelly sandy loam, very gravelly sandy loam, or very stony sandy loam. It is 20 to 55 percent rock fragments.

The 2BC horizon has value of 6 or 7 dry and 4 or 5 moist. It is very gravelly loamy sand, extremely gravelly loamy sand, or very cobbly loamy sand. It is 40 to 65 percent rock fragments.

The 2C horizon has hue of 10YR or 2.5Y, value of 6 or 7 dry and 4 to 6 moist, and chroma of 4 to 6 moist or dry. It is very gravelly loamy sand, very gravelly loamy coarse sand, extremely gravelly loamy coarse sand, or extremely cobbly sand. It is 50 to 70 percent rock fragments.

Line Series

The Line series consists of very deep, well drained soils on terraces, alluvial fans, and terrace escarpments. These soils formed in volcanic ash and pumice over glacial outwash. Slope is 3 to 60 percent. Elevation is 1,800 to 3,000 feet. The average annual precipitation is 65 to 110 inches, the average annual air temperature is 39 to 42 degrees F, and the frost-free season at 32 degrees is 70 to 110 days.

Typical pedon of Line cindery fine sandy loam, 3 to 30 percent slopes, 800 feet east of the northwest corner of sec. 14, T. 27 N., R. 15 E.

Oi—4 inches to 0; undecomposed needles and twigs.

E—0 to 1 inch; light gray (10YR 7/1) loamy fine sand, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; many fine irregular pores; 10 percent pebbles; extremely acid; abrupt smooth boundary.

Bs1—1 to 4 inches; light yellowish brown (10YR 6/4) cindery fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine, medium, and coarse roots; many fine irregular pores; 10 percent pebbles and 15 percent pumice; slightly acid; clear wavy boundary.

Bs2—4 to 15 inches; light yellowish brown (10YR 6/4) cindery sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine, medium, and coarse roots; many fine irregular pores; 10 percent pebbles and 30 percent pumice; slightly acid; clear wavy boundary.

2BC—15 to 31 inches; pale yellow (2.5Y 7/4) very gravelly loamy sand, olive brown (2.5Y 4/4) moist; massive; soft, friable, nonsticky and nonplastic; common fine and medium roots; many fine and common medium irregular pores; 40 percent pebbles, 5 percent cobbles, and 15 percent pumice; neutral; abrupt wavy boundary.

2C—31 to 60 inches; light brownish gray (2.5Y 6/2) extremely gravelly coarse sand, light grayish brown (2.5Y 4/2) moist; single grain; loose; few fine roots; many coarse irregular pores; 50 percent pebbles and 20 percent cobbles; neutral.

The upper part of the particle-size control section is dominantly pyroclastic material and is 15 to 35 percent pumice. Depth to the sandy-skeletal 2BC horizon is 15 to 25 inches.

The E horizon has hue of 5YR, 7.5YR, or 10YR, value of 6 or 7 dry and 4 or 5 moist, and chroma of 1 or 2 dry or moist. It is stony fine sandy loam or gravelly fine sandy loam. It is extremely acid to slightly acid.

The Bs horizon has hue of 5YR, 7.5YR, or 10YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 3 to 6 dry or moist. It is cindery fine sandy loam, very cindery fine sandy loam, very cindery sandy loam, very gravelly sandy loam, gravelly fine sandy loam, or gravelly sandy loam. The horizon is slightly acid or neutral.

The 2C horizon is very gravelly coarse sand, extremely gravelly coarse sand, extremely cobbly coarse sand, extremely gravelly sand, very gravelly loamy sand, or extremely gravelly loamy sand. It is slightly acid or neutral.

Loneridge Series

The Loneridge series consists of very deep, well drained soils on mountainsides, benches, and plateaus. These soils formed in residuum and colluvium derived from basalt or andesite mixed with loess and volcanic ash. Slope is 3 to 60 percent. Elevation is 3,000 to 4,900 feet. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 42 to 46 degrees F, and the frost-free season at 32 degrees is 75 to 105 days.

Typical pedon of Loneridge very stony loam, 30 to 60 percent slopes, 2,000 feet west and 1,000 feet south of the northeast corner of sec. 24, T. 21 N., R. 19 E.

Oi—1 inch to 0; undecomposed forest litter.

A—0 to 8 inches; grayish brown (10YR 5/2) very stony loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many fine, medium, and coarse roots; common fine tubular pores; 20 percent pebbles, 5 percent cobbles, and 10 percent stones; 5 percent stones on surface; neutral; clear smooth boundary.

Bt1—8 to 24 inches; yellowish brown (10YR 5/4) very cobbly clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; very hard, very firm, very sticky and very plastic; common fine, medium, and coarse roots; few fine tubular pores; few faint clay films on faces of peds; 30 percent pebbles, 25 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

Bt2—24 to 45 inches; yellowish brown (10YR 5/4) very cobbly clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; very hard, very firm, very sticky and very plastic; common fine, medium, and coarse roots; few fine tubular pores; few faint clay films on faces of peds; 30 percent pebbles, 25 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

Bt3—45 to 60 inches; yellowish brown (10YR 5/4) extremely cobbly clay loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure; very hard, very firm, very sticky and very plastic; few fine roots; few very fine tubular pores; few faint clay films on faces of peds; 25 percent pebbles, 30 percent cobbles, and 10 percent stones; neutral.

The particle-size control section is 35 to 50 percent clay and 40 to 75 percent rock fragments. The profile is neutral to moderately acid.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist. It is stony loam or very stony loam.

The Bt1 and Bt2 horizons have value of 4 to 6 dry and 3 or 4 moist, and they have chroma of 3 or 4 dry or moist. They are very cobbly clay loam, extremely cobbly clay loam, very gravelly clay loam, extremely gravelly clay loam, very gravelly loam, or very cobbly clay.

The Bt3 horizon has value of 4 to 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is very cobbly clay loam, extremely cobbly clay loam, very cobbly clay, extremely cobbly clay, extremely gravelly clay loam, very gravelly clay loam, or extremely gravelly clay.

Macreeing Series

The Macreeing series consists of deep, well drained soils on mountainsides. These soils formed in loess and volcanic ash mixed with colluvium derived from rhyolite or granodiorite. Slope is 30 to 90 percent. Elevation is 2,500 to 3,800 feet. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 100 to 140 days.

Typical pedon Macreeing stony fine sandy loam, 30 to 60 percent slopes, 1,900 feet east and 2,500 feet north of southwest corner of sec. 30, T. 27 N., R. 21 E.

A—0 to 5 inches; grayish brown (10YR 5/2) stony fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common fine roots; few very fine tubular pores; 10 percent pebbles, 5 percent cobbles, and 5 percent stones; 2 percent surface stones; slightly alkaline; clear wavy boundary.

Bw—5 to 23 inches; pale brown (10YR 6/3) very cobbly sandy loam, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common medium and few coarse roots; few very fine interstitial pores; 15 percent pebbles and 20 percent cobbles; neutral; gradual wavy boundary.

C—23 to 48 inches; light yellowish brown (10YR 6/4) very cobbly coarse sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; few medium and fine roots; few fine tubular pores; 20 percent pebbles and 25 percent cobbles; neutral; abrupt wavy boundary.

R—48 to 52 inches; fractured unweathered rhyolite.

Depth to unweathered bedrock is 40 to 60 inches. The particle-size control section is 35 to 75 percent rock fragments. The profile is neutral or slightly alkaline.

The A horizon has value of 5 or 6 dry and chroma of 2 or 3 dry or moist.

The Bw horizon has value of 3 or 4 moist and chroma of 2 or 3 dry or moist. It is very cobbly sandy loam, very cobbly coarse sandy loam, or very gravelly sandy loam.

The C horizon has value of 4 or 5 moist and chroma of 3 or 4 dry or moist. It is very cobbly coarse sandy loam, very gravelly coarse sandy loam, extremely gravelly sandy loam, or very gravelly sandy loam.

Mansonia Series

The Mansonia series consists of deep and very deep, well drained soils on foothills. These soils formed in volcanic ash and pumice over granodiorite or glacial till. Slope is 8 to 90 percent. Elevation is 1,100 to 3,200 feet. The average annual precipitation is 12 to 15 inches, the average annual air temperature is 47 to 49 degrees F, and the frost-free season at 32 degrees is 130 to 160 days.

Typical pedon of Mansonia cindery fine sandy loam in an area of Mansonia-Swakane-Rock outcrop complex, 8 to 45 percent slopes, 2,000 feet west and 1,750 feet north of the southeast corner of sec. 26, T. 29 N., R. 21 E.

A1—0 to 4 inches; grayish brown (10YR 5/2) cindery fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; many fine tubular pores; 15 percent pumice; neutral; clear wavy boundary.

A2—4 to 10 inches; brown (10YR 5/3) cindery fine sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; many fine tubular pores; 15 percent pumice; neutral; clear wavy boundary.

Bw—10 to 20 inches; light brownish gray (10YR 6/2) cindery sandy loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine roots; common fine tubular pores; 20 percent pumice; neutral; gradual wavy boundary.

C—20 to 50 inches; pale brown (10YR 6/3) cindery sandy loam, single grain; soft, very friable, nonsticky and nonplastic; few fine roots; common fine tubular pores; 5 percent pebbles and 30 percent pumice; neutral (pH 7.0); abrupt wavy boundary.

2R—50 to 54 inches; unweathered granodiorite.

The particle-size control section is 5 to 35 percent pumice and 0 to 10 percent hard rock fragments. Depth to unweathered bedrock or glacial till is 40 to 60 inches. The profile is neutral or slightly alkaline.

The A horizon has value of 2 or 3 moist and chroma of 2 or 3 dry or moist. It is fine sandy loam or cindery fine sandy loam.

The Bw horizon has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 2 to 4 dry or moist. It is cindery sandy loam, cindery fine sandy loam, or gravelly sandy loam.

The C horizon has value of 4 or 5 moist and chroma of 3 or 4 dry or moist. It is cindery sandy loam or cindery fine sandy loam.

Marmont Series

The Marmont series consists of very deep, somewhat excessively drained soils on terraces and escarpments. These soils formed in volcanic ash and pumice over glacial outwash. Slope is 3 to 75 percent. Elevation is 1,100 to 1,600 feet. The average annual precipitation is 12 to 15 inches, the average annual air temperature is 47 to 49 degrees F, and the frost-free season at 32 degrees is 130 to 160 days.

Typical pedon of Marmont cindery fine sandy loam, 15 to 30 percent slopes, 500 feet south and 2,100 feet east of the northwest corner of sec. 29, T. 29 N., R. 21 E.

A—0 to 10 inches; grayish brown (10YR 5/2) cindery fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; few fine tubular pores; 25 percent pumice; neutral; clear wavy boundary.

Bw—10 to 22 inches; gray (10YR 6/1) very cindery sandy loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine roots; few fine tubular pores; 40 percent pumice and 5 percent cobbles; neutral; clear wavy boundary.

2C—22 to 60 inches; multicolored extremely gravelly sand; single grain; loose, nonsticky and nonplastic; 60 percent pebbles, 20 percent cobbles, and 5 percent stones; slightly alkaline.

Depth to the sandy-skeletal 2C horizon is 20 to 40 inches. The particle-size control section averages 35 to 50 percent pumice. The profile is neutral or slightly alkaline.

The A horizon has value of 3 to 5 dry and chroma of 1 or 2 dry or moist.

The Bw horizon has chroma of 1 to 3 dry or moist. It is very cindery fine sandy loam or very cindery sandy loam.

The 2C horizon is sand or coarse sand and is 50 to 60 percent pebbles, 10 to 25 percent cobbles, and 0 to 5 percent stones.

McCree Series

The McCree series consists of deep, well drained soils on mountainsides, toeslopes, and ridgetops. These soils formed in colluvium derived from rhyolite or granodiorite mixed with volcanic ash and pumice. Slope is 8 to 90 percent. Elevation is 2,300 to 5,300 feet. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 42 to 45 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of McCree stony fine sandy loam, 30 to 60 percent slopes, 1,300 feet east and 800 feet north of the southwest corner of sec. 13, T 27 N., R. 20 E.

Oe—1 inch to 0; partially decomposed forest litter; slightly acid.

A—0 to 0.5 inch; dark grayish brown (10YR 4/2) stony fine sandy loam, black (10YR 2/1) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; many fine tubular pores; 5 percent pumice, 15 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; abrupt smooth boundary.

E—0.5 inch to 5 inches; light brownish gray (10YR 6/2) stony fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; many fine and medium tubular pores; 5 percent pumice, 15 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

Bw—5 to 19 inches; very pale brown (10YR 7/3) very stony fine sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; many fine and medium tubular pores; 30 percent pebbles, 5 percent pumice, 5 percent cobbles, and 15 percent stones; slightly acid; gradual wavy boundary.

2C1—19 to 36 inches; very pale brown (10YR 7/4) extremely stony sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; common medium and coarse roots; many medium and coarse tubular pores; 20 percent pebbles, 5 percent pumice, 5 percent cobbles, and 45 percent stones; neutral; gradual wavy boundary

2C2—36 to 56 inches; yellow (10YR 7/6) extremely stony sandy loam, yellowish brown (10YR 5/6) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; common fine tubular pores; 35 percent pebbles, 15 percent cobbles, and 25 percent stones; neutral; abrupt irregular boundary.

2R—56 to 60 inches; fractured unweathered rhyolite.

Depth to unweathered bedrock is 40 to 60 inches. The particle-size control section averages 35 to 70 percent rock fragments.

The A horizon, where present, has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 1 or 2 dry or moist. It is slightly acid or neutral.

The E horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 1 or 2 dry or moist. It is slightly acid or neutral.

The Bw horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 2 or 3 dry or moist. It is very stony fine sandy loam or very cobbly sandy loam. It is slightly acid or neutral.

The 2C horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 3 to 6 dry or moist. It is extremely stony sandy loam, very stony sandy loam, or very cobbly sandy loam.

Mippon Series

The Mippon series consists of very deep, moderately well drained soils on flood plains. These soils formed in recent alluvium. Slope is 0 to 3 percent. Elevation is 1,200 to 2,100 feet. The average annual precipitation is 18 to 35 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 100 to 150 days.

Typical pedon of Mippon gravelly fine sandy loam, 0 to 3 percent slopes, 150 feet east of the northwest corner of sec. 5, T. 23 N., R. 18 E.

A—0 to 10 inches; grayish brown (10YR 5/2) gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; few fine tubular pores; 25 percent pebbles and 5 percent cobbles; slightly alkaline; clear smooth boundary.

C1—10 to 18 inches; light brownish gray (10YR 6/2) very cobbly loamy sand, dark brown (10YR 3/3) moist; massive; soft, very friable, nonsticky and nonplastic; common fine roots; few fine tubular pores; 30 percent pebbles, 20 percent cobbles, and 5 percent stones; slightly alkaline; abrupt wavy boundary.

C2—18 to 60 inches; multicolored extremely cobbly loamy coarse sand; single grain; loose; few fine roots; 50 percent pebbles, 30 percent cobbles, and 10 percent stones; slightly alkaline.

The particle-size control section averages more than 35 percent rock fragments. Depth to the sandy-skeletal C horizon is 10 to 20 inches. The profile is slightly acid to slightly alkaline. An apparent water table is present in February through April, and it is at a depth of 3 to 6 feet. Occasional, brief periods of flooding occur in February through May.

The A horizon has value of 4 or 5 dry. It is gravelly fine sandy loam, very gravelly loamy fine sand, or very bouldery loamy sand.

The C1 horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist. It is very gravelly sandy loam, very cobbly loam, very cobbly loamy sand, very cobbly sandy loam, or very gravelly sandy loam.

The C2 horizon is extremely gravelly loamy coarse sand, extremely gravelly sand, extremely cobbly loamy sand, very cobbly sand, or extremely cobbly loamy coarse sand.

Morical Series

The Morical series consists of moderately deep, well drained soils on mountainsides, foothills, and ridgetops. These soils formed in residuum and colluvium derived from granitic rock mixed with volcanic ash and loess in the upper part. Slope is 3 to 90 percent. Elevation is 2,000 to 3,000 feet. The average annual precipitation is 15 to 18 inches, the average annual air temperature is 45 to 49 degrees F, and the frost-free season at 32 degrees is 100 to 140 days.

Typical pedon of Morical fine sandy loam, 3 to 15 percent slopes, 2,500 feet south of the northwest corner of sec. 29, T. 26 N., R. 20 E.

A—0 to 12 inches; grayish brown (10YR 5/2) fine sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; many fine and very fine tubular pores; 5 percent pebbles; slightly alkaline; gradual wavy boundary.

BA—12 to 23 inches; brown (10YR 5/3) sandy loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common fine and medium roots; many fine and very fine tubular pores; 5 percent pebbles; neutral; gradual wavy boundary.

Bt—23 to 37 inches; light yellowish brown (10YR 6/4) sandy clay loam, yellowish brown (10YR 5/4) moist; moderate medium prismatic structure; hard, very firm, sticky and plastic; few fine roots; common fine and medium tubular pores; few faint clay films on faces of peds; 5 percent pebbles; neutral; clear wavy boundary.
Cr—37 to 47 inches; weathered granodiorite; massive, but crumbles to pebbles and coarse sand.

Thickness of the solum and depth to weathered bedrock are 20 to 40 inches. The particle-size control section is 5 to 35 percent hard rock fragments. The profile is neutral or slightly alkaline throughout.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist.

The BA horizon has value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is sandy loam, loam, or gravelly sandy loam.

The Bt horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry or moist. It is sandy clay loam, clay loam, gravelly sandy clay loam, silt loam, loam, or gravelly loam.

Mountaineer Series

The Mountaineer series consists of moderately deep, well drained soils on mountainsides. These soils formed in colluvium derived from schist and gneiss mixed with volcanic ash and loess. Slope is 30 to 90 percent. Elevation is 1,400 to 4,800 feet. The average annual precipitation is 40 to 70 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 80 to 110 days.

Typical pedon of Mountaineer stony sandy loam, 30 to 60 percent slopes, 500 feet south and 1,300 feet west of the northeast corner of sec. 35, T. 26 N., R. 16 E.

A1—0 to 4 inches; dark grayish brown (10YR 4/2) stony sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; common very fine tubular pores; 20 percent pebbles, 10 percent cobbles, and 10 percent soft schist pebbles; 5 percent surface stones; moderately acid; clear wavy boundary.
A2—4 to 19 inches; dark brown (10YR 4/3) very cobbly sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots; common very fine tubular pores; 20 percent pebbles, 20 percent cobbles, 10 percent stones, and 10 percent soft pebbles; moderately acid; clear wavy boundary.
Bw—19 to 38 inches; yellowish brown (10YR 5/4) extremely stony sandy loam, dark brown (10YR 3/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and fine and few coarse roots; common very fine tubular pores; 15 percent pebbles, 20 percent cobbles, 30 percent stones, and 15 percent soft pebbles; moderately acid; abrupt wavy boundary.
R—38 to 42 inches; fractured unweathered schist.

The particle-size control section averages 35 to 60 percent rock fragments. Depth to unweathered bedrock is 20 to 40 inches. The profile is slightly acid or moderately acid.

The A horizon has value of 3 to 5 dry and 2 or 3 moist, and it has chroma of 1 to 3 dry or moist.

The Bw horizon has value of 4 or 5 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry or moist. It is very cobbly, very flaggy, or extremely stony sandy loam.

Nahahum Series

The Nahahum series consists of very deep, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from schist or gneiss mixed with volcanic ash and loess. Slope is 30 to 60 percent. Elevation is 2,500 to 4,200 feet. The average annual precipitation is 20 to 30 inches, the average annual air temperature is 43 to 46 degrees F, and the frost-free season at 32 degrees is 85 to 145 days.

Typical pedon of Nahahum loam, 30 to 60 percent slopes, 600 feet north and 1,600 feet east of the southwest corner of sec. 2, T. 24 N., R. 19 E.

Oi—1 inch to 0; undecomposed forest litter.

A—0 to 3 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure breaking to moderate fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine roots; few fine tubular pores; 5 percent pebbles and 10 percent soft pebbles; neutral; abrupt wavy boundary.

E—3 to 16 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and plastic; common fine and medium roots; few fine tubular pores; 5 percent pebbles, 5 percent cobbles, 10 percent soft pebbles, and 5 percent soft cobbles; neutral; gradual wavy boundary.

2Bt1—16 to 33 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky structure; very hard, firm, sticky and plastic; few fine and medium roots; common very fine tubular pores; 10 percent pebbles, 5 percent cobbles, 10 percent soft pebbles, and 10 percent soft cobbles; slightly acid; gradual wavy boundary.

2Bt2—33 to 44 inches; yellowish brown (10YR 5/6) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; very hard, firm, sticky and plastic; few fine and medium roots; common very fine tubular pores; 15 percent pebbles, 10 percent cobbles, 10 percent soft pebbles, and 10 percent soft cobbles; slightly acid; abrupt wavy boundary.

2BC—44 to 60 inches; brownish yellow (10YR 6/6) cobbly loam, dark yellowish brown (10YR 4/6) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and plastic; few fine and medium roots; few very fine tubular pores; 10 percent pebbles, 20 percent cobbles, 5 percent soft pebbles, and 20 percent soft cobbles; slightly acid.

The particle-size control section averages 27 to 35 percent clay and is 10 to 35 percent hard rock fragments. The profile is neutral or slightly acid.

The A horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist.

The E horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is loam or gravelly loam.

The 2Bt horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 to 6 dry or moist. It is gravelly clay loam, cobbly clay loam, or gravelly sandy clay loam.

The 2BC horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 3 to 6 dry or moist. It is cobbly clay loam, cobbly sandy clay loam, or cobbly loam.

Nard Series

The Nard series consists of very deep, well drained soils on mountainsides and toeslopes. These soils formed in residuum and colluvium derived from sandstone mixed with volcanic ash and loess. Slope is 3 to 60 percent. Elevation is 1,600 to 4,000 feet. The average annual precipitation is 22 to 40 inches, the mean annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 140 days.

Typical pedon of Nard sandy loam, 30 to 60 percent slopes, 1,320 feet north and 1,320 feet east of the southwest corner of sec. 6, T. 23 N., R. 18 E.

Oi—1 inch to 0; undecomposed forest litter of needles and twigs.

A—0 to 3 inches; pale brown (10YR 6/3) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine and medium and common coarse roots; many irregular pores; moderately acid; abrupt smooth boundary.

AE—3 to 7 inches; light brownish gray and pale brown (10YR 6/2 and 6/3) sandy loam, very dark grayish brown and dark brown (10YR 3/2 and 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many fine, common medium, and few coarse roots; common irregular and tubular pores; slightly acid; abrupt wavy boundary.

E—7 to 12 inches; very pale brown and pale brown (10YR 7/3 and 6/3) sandy loam, dark brown (10YR 4/3 and 3/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; many fine irregular pores and few fine tubular pores; slightly acid; clear wavy boundary.

E/Bt—12 to 17 inches; light yellowish brown and yellowish brown (10YR 6/4 and 5/4) sandy loam, dark brown (10YR 4/3 and 3/3) moist; weak very coarse subangular blocky structure; very hard, friable, slightly sticky and plastic; common very fine and fine roots; few fine irregular pores and common fine and few coarse tubular pores; very few discontinuous faint clay bridges between sand grains; slightly acid; gradual wavy boundary.

Bt/E—17 to 27 inches; yellowish brown and pale brown (10YR 5/4 and 6/3) sandy loam, dark yellowish brown (10YR 4/4 and 4/3) moist; weak medium subangular blocky structure parting to weak medium granular; very hard, friable, moderately sticky and moderately plastic; common fine and medium roots; few fine tubular pores and common fine irregular pores; common patchy faint clay films that are dark brown (7.5YR 4/4) when moist and are on faces of peds and very few discontinuous faint clay bridges between sand grains; 1 percent pebbles; slightly acid; gradual wavy boundary.

Bt1—27 to 46 inches; strong brown and yellowish brown (7.5YR 5/6 and 10YR 5/4) loam, dark brown and dark yellowish brown (7.5YR 4/4 and 10YR 4/4) moist; weak medium prismatic structure parting to moderate medium subangular blocky; very hard, firm, moderately sticky and moderately plastic; many fine and common medium roots; few fine tubular pores and common fine irregular pores; many discontinuous distinct clay films that are dark brown (7.5YR 4/4) when moist and are on faces of peds; slightly acid; diffuse wavy boundary.

Bt2—46 to 56 inches; light yellowish brown and brownish yellow (10YR 6/4 and 6/6) loam, dark yellowish brown (10YR 4/4 and 4/6) moist; moderate medium subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common fine and medium roots; few fine tubular pores and common fine irregular pores; common discontinuous faint clay films that are dark brown (7.5YR 4/4) when moist and are on faces of peds, common discontinuous faint clay bridges between sand grains, and common discontinuous distinct skeletans on faces of peds; 1 percent pebbles; slightly acid; diffuse smooth boundary.

Bt/E´—56 to 67 inches; dark brown, very pale brown, and yellowish brown (7.5YR 4/4, 10YR 7/4, and 10YR 5/6) loam, dark brown and dark yellowish brown (7.5YR 4/4, 10YR 4/4, and 10YR 3/6) moist; moderate medium subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common fine and medium roots; few fine tubular pores and common fine irregular pores; many discontinuous prominent clay films that are dark brown (10YR 4/4) when moist and are on faces of peds and few patchy distinct skeletans that are very pale brown (10YR 7/4) when moist and are on faces of peds; slightly acid.

The particle-size control section averages 25 to 35 percent clay and 0 to 10 percent unweathered rock fragments.

The A and AE horizons have value of 5 or 6 dry and 3 or 4 moist, and they have chroma of 1 to 3 dry or moist. They are neutral to moderately acid.

The E horizon has value of 6 or 7 dry and 3 to 5 moist, and it has chroma of 2 to 4 moist or dry. It is neutral to moderately acid.

The E/Bt and Bt/E horizons have value of 3 to 5 moist and 5 to 7 dry, and they have chroma of 2 to 4 moist or dry. They are loam, clay loam, sandy loam, or silt loam. They are neutral to moderately acid.

The Bt and Bt/E´ horizons have hue of 10YR or 7.5YR, value of 4 or 5 moist and 4 to 7 dry, and chroma of 2 to 6 dry or moist. They are loam, clay loam, or silty clay loam. They are neutral or slightly acid.

Nardine Series

The Nardine series consists of very deep, moderately well drained soils in areas near mountain meadows. These soils formed in alluvium mixed with loess in the upper part. Slope is 0 to 8 percent. Elevation is 2,600 to 3,000 feet. The average annual precipitation is 22 to 28 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Nardine loam, 0 to 8 percent slopes, 2,000 feet south and 750 feet east of the northwest corner of sec. 22, T. 23 N., R. 18 E.

Oi—1 inch to 0; undecomposed forest litter of needles and twigs.

E—0 to 4 inches; light brownish gray (10YR 6/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine roots; few fine tubular and interstitial pores; slightly acid; clear smooth boundary.

E/B—4 to 17 inches; E part is light brownish gray (10YR 6/2), dark grayish brown (10YR 4/2) moist, and B part is brown (10YR 5/3) loam, dark brown (10YR 4/3) moist; moderate fine prismatic structure; hard, firm, slightly sticky and slightly plastic; common fine and few medium roots; few fine tubular pores and common fine interstitial pores; slightly acid; abrupt smooth boundary.

Bt1—17 to 35 inches; grayish brown (10YR 5/2) clay loam, dark brown (10YR 4/3) moist; strong medium prismatic structure parting to stony medium subangular blocky; very hard, very firm, moderately sticky and moderately plastic; few fine roots; few fine tubular pores and common fine interstitial pores; many distinct clay films on faces of peds and few faint clay films in pores; 5 percent pebbles; slightly acid; gradual wavy boundary.

Bt2—35 to 42 inches; grayish brown (2.5Y 5/2) clay loam, olive brown (2.5Y 5/2) moist; few fine distinct yellowish brown (10YR 5/6) mottles; moderate fine subangular blocky structure; hard, firm, sticky and moderately plastic; few very fine roots; many fine interstitial pores and few fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent pebbles; slightly acid; clear wavy boundary.

Bt3—42 to 50 inches; pale brown (10YR 6/3) loam, yellowish brown (10YR 5/4) moist; common fine distinct yellowish brown (10YR 5/6) mottles; moderate fine subangular blocky structure; hard, firm, slightly sticky and moderately plastic; few very fine roots; few fine tubular pores and common fine interstitial pores; common distinct clay films on faces of peds and in pores; 5 percent pebbles; slightly acid; abrupt wavy boundary.

BC—50 to 60 inches; light yellowish brown (10YR 6/4) loam, yellowish brown (10YR

5/4) moist; many fine distinct yellowish brown (10YR 5/6) mottles; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; few very fine roots; common fine tubular pores and many fine interstitial pores; few faint clay films on faces of peds; 5 percent pebbles; neutral.

The particle-size control section averages more than 35 percent clay. The profile is 0 to 5 percent pebbles. An apparent water table is present in January through June, and it is at its highest level (1.4 to 2.9 feet) in March.

The E horizon has value of 6 or 7 dry and chroma of 2 or 3 dry or moist.

The E/B horizon, where present, has value of 5 or 6 dry and chroma of 2 or 3 dry or moist.

The Bt horizon has hue of 2.5Y or 10YR, value of 5 to 7 dry and 3 to 5 moist, and chroma of 2 or 3 dry and 3 or 4 moist.

The BC horizon has value of 6 or 7 dry and chroma of 3 or 4 dry or moist. It is loam or clay loam. It is slightly acid or neutral.

Nardmont Series

The Nardmont series consists of very deep, well drained soils on mountainsides and toeslopes. These soils formed in colluvium derived from schist mixed with volcanic ash and loess. Slope is 3 to 60 percent. Elevation is 2,000 to 4,000 feet. The average annual precipitation is 40 to 50 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 80 to 110 days.

Typical pedon of Nardmont loam, 30 to 60 percent slopes, 1,100 feet east and 1,300 feet north of the southwest corner of sec. 32, T. 26 N., R. 17 E.

Oi—2 inches to 0; undecomposed forest litter.

A—0 to 2 inches; light brownish gray (2.5Y 6/2) loam, very dark grayish brown (2.5Y 3/2) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; few fine and medium roots; few very fine tubular pores; 5 percent pebbles; slightly acid; clear wavy boundary.

E—2 to 15 inches; light brownish gray (2.5Y 6/2) loam, dark grayish brown (2.5Y 4/2) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few fine roots; few very fine to coarse tubular pores; 5 percent pebbles; neutral; clear wavy boundary.

Bt1—15 to 28 inches; dark grayish brown (2.5Y 4/2) loam, very dark grayish brown (2.5Y 3/2) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and moderately plastic; few fine roots; few very fine and fine tubular pores; few faint clay films in pores and on faces of peds; 5 percent pebbles; neutral; clear wavy boundary.

Bt2—28 to 47 inches; dark grayish brown (2.5Y 4/2) loam, very dark grayish brown (2.5Y 3/2) moist; weak medium subangular blocky structure; hard, firm, slightly sticky and moderately plastic; few fine and medium roots; few very fine and fine pores; few faint clay films in pores and on faces of peds; 10 percent pebbles and 2 percent cobbles; slightly acid; gradual wavy boundary.

BCt—47 to 60 inches; grayish brown (2.5Y 5/2) gravelly loam, very dark grayish brown (2.5Y 3/2) moist; weak medium subangular blocky structure; hard, firm, slightly sticky and moderately plastic; few fine roots; few very fine and fine tubular pores; 10 percent pebbles and 5 percent cobbles; slightly acid.

The profile is 5 to 20 percent rock fragments. It is slightly acid or neutral.

The A and E horizons have chroma of 2 or 3 dry or moist.

The Bt horizon has value of 4 or 5 dry and chroma of 2 or 3 dry or moist. It is loam or gravelly loam.

The BC horizon has hue of 2.5Y or 10YR, value of 4 or 5 dry, and chroma of 2 to 6 dry or moist.

Natapoc Series

The Natapoc series consists of very deep, well drained soils on mountainsides and toeslopes. These soils formed in volcanic ash over glacial till. Slope is 3 to 60 percent. Elevation is 1,500 to 2,400 feet. The average annual precipitation is 18 to 27 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Natapoc stony sandy loam, 3 to 30 percent slopes, 1,450 feet west of the northeast corner of sec. 35, T. 24 N., R. 17 E.

Oi—0.25 inch to 0; undecomposed forest litter.

E—0 to 0.25 inch; light gray (10YR 7/2) stony sandy loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; few fine tubular pores; 3 percent surface stones; neutral; abrupt smooth boundary.

Bw1—0.25 inch to 6 inches; pale brown (10YR 6/3) stony sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; few fine tubular pores; 5 percent pebbles, 1 percent cobbles, and 2 percent stones; neutral; gradual smooth boundary.

Bw2—6 to 19 inches; very pale brown (10YR 7/4) sandy loam, brown (10YR 4/3) moist; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; common fine tubular pores; 2 percent pebbles, 5 percent cobbles, and 5 percent stones; neutral; clear wavy boundary.

2C—19 to 60 inches; light gray (2.5Y 7/2) very bouldery sandy loam, dark grayish brown (2.5Y 4/2) moist; massive; hard, firm, nonsticky and nonplastic; few fine roots; common fine and medium tubular pores; 10 percent pebbles, 10 percent cobbles, 15 percent stones, and 15 percent boulders; neutral.

Thickness of the volcanic ash and depth to the loamy-skeletal 2C horizon are 18 to 24 inches. The profile is slightly acid or neutral.

The E horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 1 or 2 dry or moist.

The Bw horizon has hue of 10YR or 7.5YR, value of 5 to 7 dry and 4 or 5 moist, and chroma of 3 or 4 dry or moist. It is sandy loam, stony sandy loam, or gravelly sandy loam.

The 2C horizon has hue of 10YR or 2.5Y, value of 6 or 7 dry and 4 or 5 moist, and chroma of 2 to 4 dry or moist. It is very bouldery sandy loam, very stony sandy loam, or very cobbly sandy loam. It averages 35 to 60 percent rock fragments.

Naxing Series

The Naxing series consists of very deep, well drained soils on mountainsides and footslopes. These soils formed in colluvium and residuum derived from basalt mixed with a mantle of volcanic ash and loess. Slope is 5 to 60 percent. Elevation is 4,600 to 6,800 feet. The average annual precipitation is 22 to 30 inches, the average annual air temperature is 40 to 42 degrees F, and the frost-free season at 32 degrees is 70 to 110 days.

Typical pedon of Naxing very stony loam, 30 to 60 percent slopes, 2,000 feet west and 1,000 feet north of the southeast corner of sec. 22, T. 21 N., R. 19 E.

Oi—1 inch to 0; undecomposed forest litter.

A—0 to 10 inches; grayish brown (10YR 5/2) very stony loam, dark brown (7.5YR 3/3) moist; weak medium subangular blocky structure and weak fine granular; soft, very friable, nonsticky and slightly plastic; many fine and medium and few coarse roots; common very fine tubular pores; 15 percent pebbles, 30 percent cobbles, and 5 percent stones; 5 percent surface stones; moderately acid; abrupt wavy boundary.

Bw—10 to 16 inches; yellowish brown (10YR 5/4) very cobbly loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; common fine and medium and few coarse roots; common very fine tubular pores; 20 percent pebbles, 30 percent cobbles, and 5 percent stones; moderately acid; gradual wavy boundary.

BC—16 to 29 inches; yellowish brown (10YR 5/4) very cobbly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; few medium and coarse roots; common very fine tubular pores; 20 percent pebbles, 30 percent cobbles, and 10 percent stones; moderately acid; gradual wavy boundary.

C—29 to 60 inches; yellowish brown (10YR 5/6) extremely cobbly loam, dark yellowish brown (10YR 3/6) moist; massive; soft, very friable, nonsticky and slightly plastic; few coarse roots; common very fine tubular pores; 20 percent pebbles, 40 percent cobbles, and 15 percent stones; moderately acid.

The particle-size control section averages 40 to 75 percent rock fragments.

The A horizon has hue of 7.5YR or 10YR, value of 4 or 5 dry and 2 or 3 moist, and chroma of 2 or 3 dry or moist.

The Bw and BC horizons have hue of 7.5YR or 10YR, value of 5 to 7 dry and 3 or 4 moist, and chroma of 4 or 6 dry or moist. They are very cobbly loam, very cobbly sandy loam, or extremely cobbly loam. They are strongly acid or moderately acid.

The C horizon has hue of 7.5YR or 10YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 4 or 6 dry or moist. It is extremely cobbly loam, extremely cobbly sandy loam, extremely gravelly loam, or very cobbly sandy loam. It is strongly acid or moderately acid.

Newbell Series

The Newbell series consists of very deep, well drained soils on mountainsides. These soils formed in glacial till and colluvium derived from granodiorite or schist with a mantle of volcanic ash. Slope is 30 to 60 percent. Elevation is 2,200 to 3,500 feet. The average annual precipitation is 30 to 35 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Newbell bouldery sandy loam, 30 to 60 percent slopes, 1,000 feet west and 2,000 feet south of the northeast corner of sec. 5, T. 24 N., R. 16 E.

Oi—3 inches to 0; matted undecomposed forest litter.

E—0 to 1 inch; gray (10YR 6/1) bouldery sandy loam, dark gray (10YR 4/1) moist; single grain; loose; few fine and medium roots; 5 percent pebbles, 5 percent cobbles, 5 percent stones; 1 to 3 percent boulders scattered on surface; slightly acid; abrupt smooth boundary.

Bw—1 to 11 inches; yellowish brown (10YR 5/4) sandy loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common medium and few fine roots; common very fine tubular pores; 5 percent pebbles, 5 percent cobbles, and 5 percent stones and boulders; slightly acid; abrupt wavy boundary.

2C1—11 to 19 inches; pale brown (10YR 6/3) very cobbly sandy loam, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common medium and few fine roots; common very fine tubular pores; 15 percent pebbles, 20 percent cobbles, and 5 percent stones; slightly acid; diffuse wavy boundary.

2C2—19 to 60 inches; light olive brown (2.5Y 5/4) very cobbly sandy loam, olive brown (2.5Y 4/4) moist; massive; hard, very friable, nonsticky and slightly plastic; few coarse roots; few very fine tubular pores; 15 percent pebbles, 20 percent cobbles, and 5 percent stones; neutral.

Depth to the loamy-skeletal 2C horizon is 10 to 20 inches. The particle-size control section averages 35 to 60 percent rock fragments. The profile is moderately acid to neutral.

The E horizon, where present, has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 1 or 2 dry or moist.

The Bw horizon has hue of 10YR or 7.5YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 3 or 4 dry or moist. It is sandy loam, gravelly sandy loam, or cobbly sandy loam.

The 2C horizon has hue of 10YR or 2.5Y, value of 5 to 7 dry and 4 or 5 moist, and chroma of 2 to 4 dry or moist. It is very gravelly loam, very cobbly fine sandy loam, very stony sandy loam, very stony loamy sand, very gravelly sandy loam, or very cobbly sandy loam.

Nimue Series

The Nimue series consists of very deep, well drained soils on mountainsides. These soils formed in colluvium derived from schist and gneiss with a mantle of volcanic ash. Slope is 3 to 90 percent. Elevation is 3,100 to 5,500 feet. The average annual precipitation is 70 to 110 inches, the average annual air temperature is 38 to 41 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Nimue cobbly fine sandy loam, 30 to 60 percent slopes, 1,300 feet east and 1,400 feet south of the northwest corner of sec. 13, T. 26 N., R. 13 E.

Oi—4.0 to 3.5 inches; undecomposed needles and twigs.

Oe—3.5 inches to 0; matted decomposing forest litter.

E—0 to 1 inch; dark gray (7.5YR 4/0) loamy sand, gray (7.5YR 6/0) dry; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine and medium roots; few fine tubular pores; 5 percent pebbles; very strongly acid; abrupt smooth boundary.

Bhs1—1 to 2 inches; dark reddish brown (5YR 3/3 and 2.5/2) cobbly fine sandy loam, yellowish red and dark reddish brown (5YR 4/6 and 3/3) dry; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; moderately smeary; few fine and medium roots; few very fine tubular pores; 10 percent pebbles, 15 percent cobbles, and 5 percent stones; strongly acid; abrupt smooth boundary.

Bhs2—2 to 7 inches; yellowish red (5YR 4/6) cobbly fine sandy loam, strong brown (7.5YR 5/6) dry; moderate medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; moderately smeary; common medium and few fine and coarse roots; few very fine tubular pores; 10 percent pebbles, 15 percent cobbles, and 2 percent stones; strongly acid; clear wavy boundary.

Bs—7 to 14 inches; strong brown (7.5YR 5/8) very cobbly silt loam, reddish yellow (7.5YR 6/6) dry; weak medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; moderately smeary; common fine and medium roots; few very fine tubular pores; 10 percent pebbles, 20 percent cobbles, and 5 percent stones; strongly acid; clear irregular boundary.

2C1—14 to 32 inches; dark brown (10YR 4/3) extremely stony sandy loam, brown (10YR 5/3) dry; massive; soft, very friable, nonsticky and nonplastic; few fine and medium roots; few fine tubular pores; 20 percent pebbles, 15 percent cobbles, and 30 percent stones; moderately acid; gradual irregular boundary.

2C2—32 to 60 inches; olive brown (2.5Y 4/4) extremely stony sandy loam, light olive brown (2.5Y 5/4) dry; massive; soft, very friable, nonsticky and nonplastic; few fine roots; few very fine tubular pores; 25 percent pebbles, 10 percent cobbles, and 35 percent stones; moderately acid.

The upper 7 to 14 inches of the solum averages 60 to 90 percent volcanic ash. The particle-size control section averages 40 to 65 percent rock fragments.

The E horizon has hue of 10YR or 7.5YR, value of 3 to 7 moist and 6 to 8 dry, and chroma of 0 to 2 dry or moist. It is cobbly fine sandy loam or bouldery sandy loam. It is very strongly acid or strongly acid.

The Bhs horizon has hue of 5YR or 7.5YR, value of 3 to 5 moist, and chroma of 2 to 6 dry or moist. It is sandy loam, loam, fine sandy loam, loamy sand, or very gravelly sandy loam and is 5 to 60 percent rock fragments. The horizon is very strongly acid to moderately acid.

The Bs horizon is very cobbly loam, very gravelly sandy loam, very cobbly fine sandy loam, or very cobbly silt loam and is 35 to 45 percent rock fragments. It is strongly acid or moderately acid.

The 2C horizon has hue of 10YR or 2.5Y, value of 3 to 5 moist, and chroma of 2 to 6 dry or moist. It is extremely gravelly sandy loam, extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam, or very cobbly loam. It is strongly acid to slightly acid.

Oldbutte Series

The Oldbutte series consists of very deep, well drained soils that are dominantly on mountainsides but are also on bottom lands in Ollala Canyon. These soils formed in weathered sandstone mixed with loess in the upper part or in alluvium derived from sandstone. Slope is 3 to 65 percent. Elevation is 1,900 to 3,800 feet. The average annual precipitation is 18 to 22 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Oldbutte silt loam, 45 to 65 percent slopes, 1,400 feet west and 1,200 feet north of the southeast corner of sec. 16, T. 24 N., R. 19 E.

A1—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak medium granular structure; slightly hard, friable, nonsticky and slightly plastic; many very fine and fine roots; few fine interstitial pores; slightly alkaline; gradual wavy boundary.

A2—4 to 17 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak coarse granular structure; slightly hard, friable, nonsticky and slightly plastic; many very fine and fine roots; few fine interstitial pores; slightly alkaline; clear wavy boundary.

BAt—17 to 28 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; very hard, very firm, moderately sticky and moderately plastic; common fine and very fine roots; common fine and very fine interstitial pores; slightly alkaline; gradual wavy boundary.

Bt—28 to 36 inches; brown (10YR 5/3) clay loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; hard, very firm, slightly sticky and moderately plastic; common fine and very fine roots; common fine and very fine interstitial pores; slightly alkaline; clear wavy boundary.

C—36 to 60 inches; brown (10YR 5/3) loam with pockets of partially decomposed sandstone, dark brown (10YR 4/3) moist; massive; hard, firm, nonsticky and slightly plastic; few fine roots; few medium tubular pores; slightly alkaline.

The particle-size control section averages 25 to 35 percent clay and 0 to 5 percent unweathered rock fragments. The profile is neutral or slightly alkaline throughout.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist.

The BAt and Bt horizons have value of 5 or 6 dry and 3 to 6 moist, and they have chroma of 3 or 4 dry and 2 to 4 moist. They are clay loam or silty clay loam.

The C horizon has value of 5 or 6 dry and chroma of 2 or 3 dry and 3 or 4 moist. It is loam or clay loam.

Palmich Series

The Palmich series consists of very deep, well drained soils on footslopes, backslopes, and ridgetops of mountains. These soils formed in volcanic ash and pumice over colluvium derived from granodiorite or rhyolite. Slope is 15 to 90 percent. Elevation is 2,300 to 5,200 feet. The average annual precipitation is 25 to 35 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 80 to 130 days.

Typical pedon of Palmich cindery sandy loam, 30 to 60 percent slopes, 2,080 feet east and 2,100 feet north of the southwest corner of sec. 19, T. 27 N., R. 21 E.

Oi—2 inches to 0; partially decomposed needles, twigs, and grass.

A—0 to 4 inches; light gray (10YR 6/1) cindery sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common fine and medium and few coarse roots; many fine and medium tubular pores; 25 percent pumice; neutral; clear wavy boundary.

AB—4 to 15 inches; light brownish gray (10YR 6/2) very cindery sandy loam, dark brown (10YR 3/3) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; common fine, medium, and coarse roots; many fine and medium tubular pores; 40 percent pumice; slightly acid; gradual wavy boundary.

Bw1—15 to 26 inches; light brownish gray (10YR 6/2) very cindery sandy loam, dark brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common fine and medium roots; many fine and medium tubular pores; 50 percent pumice; slightly acid; gradual wavy boundary.

Bw2—26 to 44 inches; pale brown (10YR 6/3) extremely cindery sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; few fine and medium roots; many fine and medium tubular pores; 70 percent pumice; slightly acid; gradual wavy boundary.

2Bw3—44 to 60 inches; very pale brown (10YR 7/3) very gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; few medium and coarse roots; many medium and coarse tubular pores; 40 percent pebbles and 15 percent pumice; moderately acid.

The particle-size control section is dominantly volcanic ash and pumice and averages about 35 to 80 percent pumice.

The A and AB horizons have value of 5 to 7 dry and chroma of 1 to 3 dry or moist. They are neutral or slightly acid.

The Bw1 horizon has value of 5 to 7 dry and chroma of 2 or 3 dry or moist. It is cindery sandy loam, cindery fine sandy loam, or very cindery sandy loam. It is 0 to 5 percent rock fragments. The horizon is neutral or slightly acid.

The Bw2 horizon has value of 6 or 7 dry and chroma of 2 to 4 dry or moist. It is very cindery sandy loam, very cindery fine sandy loam, or extremely cindery sandy loam. It is neutral or slightly acid. Some pedons have layers of extremely cindery sand that have value of 2 moist and 7 or 8 dry and chroma of 1 moist and 2 to 8 dry. The horizon is 0 to 5 percent rock fragments. It is neutral or slightly acid.

The 2Bw3 horizon has value of 6 or 7 dry and 4 to 6 moist, and it has chroma of 3 to 6 dry or moist. It is very gravelly sandy loam, very cobbly sandy loam, or gravelly sandy loam. It is moderately acid to neutral.

Palmont Series

The Palmont series consists of very deep, well drained soils on mountainsides. These soils formed in colluvium derived from rhyolite and granodiorite with a mantle of volcanic ash and pumice. Slope is 30 to 90 percent. Elevation is 2,200 to 5,300 feet. The average annual precipitation is 25 to 35 inches, the average annual air temperature is 42 to 45 degrees F, and the frost-free season at 32 degrees is 80 to 110 days.

Typical pedon of Palmont cobbly fine sandy loam, 60 to 90 percent slopes, 1,500 feet south and 200 feet west of the northeast corner of sec. 1, T. 27 N., R. 20 E.

Oi—0.5 inch to 0; undecomposed forest litter.

E—0 to 1 inch; light gray (10YR 7/2) cobbly fine sandy loam, gray (10YR 5/1) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common fine and medium interstitial pores; 10 percent pebbles, 10 percent pumice, and 5 percent cobbles; 3 percent surface cobbles; neutral; abrupt smooth boundary.

Bw—1 to 11 inches; light brownish gray (10YR 6/2) gravelly fine sandy loam, dark grayish brown (10YR 4/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common fine and medium interstitial pores; 10 percent pebbles, 5 percent cobbles, and 10 percent pumice; neutral; gradual wavy boundary.

2BC—11 to 24 inches; light gray (10YR 7/2) very gravelly loamy sand, light brownish gray (10YR 6/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; common fine and medium interstitial pores; 30 percent pebbles, 10 percent cobbles, 5 percent stones, and 15 percent pumice; neutral; gradual wavy boundary.

2C—24 to 60 inches; light gray (10YR 7/1) very gravelly loamy sand, light brownish gray (10YR 6/2) moist; single grain; soft, very friable, nonsticky and nonplastic; few fine roots; few fine and medium vesicular pores; 20 percent pebbles, 10 percent cobbles, 5 percent stones, and 20 percent pumice; neutral.

The particle-size control section averages 35 to 60 percent rock fragments and 10 to 25 percent pumice. Depth to the sandy-skeletal 2BC or 2C horizon is 10 to 20 inches. The fine-earth fraction is dominantly volcanic ash in the upper 7 to 14 inches. The profile is slightly acid or neutral.

The E horizon has value of 6 to 8 dry and 4 to 6 moist, and it has chroma of 1 or 2 dry or moist.

The Bw horizon has value of 5 to 7 dry and 3 to 6 moist, and it has chroma of 2 to 4 dry or moist. It is cobbly fine sandy loam, very gravelly fine sandy loam, very gravelly sandy loam, or cobbly sandy loam.

The 2BC horizon has value of 5 to 7 dry and 3 to 6 moist, and it has chroma of 3 or 4 moist or dry. It is very gravelly sandy loam, very cobbly loamy sand, very gravelly loamy sand, or very stony coarse sandy loam.

The 2C horizon has value of 6 or 7 dry and 4 to 6 moist, and it has chroma of 1 to 3 dry or moist. It is extremely cobbly loamy sand, very cobbly loamy sand, very gravelly loamy sand, or very cobbly loamy coarse sand.

Ramparter Series

The Ramparter series consists of very deep, well drained soils on mountain slopes. These soils formed in volcanic ash and pumice that is underlain by glacial till in some areas. Slope is 5 to 90 percent. Elevation is 2,500 to 5,800 feet. The average annual precipitation is 30 to 40 inches, the average annual air temperature is 42 to 45 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Ramparter very fine sandy loam, 30 to 60 percent slopes, 1,750 feet north and 2,000 feet east of the southwest corner of sec. 22, T. 28 N., R. 19 E.

Oi—0.75 inch to 0; undecomposed forest litter of needles, twigs, and grass.

E—0 to 2 inches; white (10YR 8/1) very fine sandy loam, light gray (10YR 7/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine and few fine roots; common fine, medium, and coarse irregular pores; 1 percent pumice; neutral; abrupt broken boundary.

Bw1—2 to 6 inches; light gray (10YR 7/2) cindery very fine sandy loam, brown (10YR 5/3) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine, common fine, and few medium roots; many very fine and fine irregular pores; 25 percent pumice; neutral; clear wavy boundary.

Bw2—6 to 10 inches; very pale brown (10YR 7/4) cindery very fine sandy loam, yellowish brown (10YR 5/4) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; many very fine irregular pores; 30 percent pumice; neutral; gradual wavy boundary.

Bw3—10 to 15 inches; very pale brown (10YR 7/4) very cindery sandy loam, yellowish brown (10YR 5/4) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; many very fine and fine irregular pores; 55 percent pumice; slightly acid; clear wavy boundary.

2Bw4—15 to 24 inches; white and very pale brown (10YR 8/2 and 8/4) cinders, brownish yellow and very pale brown (10YR 6/8 and 8/3) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine roots; many fine and medium irregular pores; 80 percent pumice; neutral; gradual wavy boundary.

2Bw5—24 to 35 inches; reddish yellow and white (7.5YR 8/6 and 10YR 8/2) cinders, reddish yellow and pink (7.5YR 6/8 and 7/4) moist; single grain; loose, nonsticky and nonplastic; few fine and very fine roots; many fine and medium irregular pores; 75 percent pumice; neutral; abrupt smooth boundary.

3B/C—35 to 46 inches; light gray and very pale brown (10YR 7/1 and 8/4) sand, gray and yellowish brown (10YR 6/1 and 5/6) moist; single grain; loose, nonsticky and nonplastic; many very fine, fine, and medium roots; many fine and medium irregular pores; 3 percent pumice; slightly acid; abrupt smooth boundary.

4Bw6—46 to 53 inches; white and very pale brown (10YR 8/2 and 8/4) cinders, light red (2.5YR 7/4 and 7/6) moist; single grain; loose, nonsticky and nonplastic; few fine and very fine roots; many medium and coarse irregular pores; 75 percent pumice; neutral; abrupt smooth boundary.

5Bw7b—53 to 60 inches; very pale brown (10YR 7/3) sandy loam, yellowish brown and grayish brown (10YR 5/6 and 5/2) moist; weak medium subangular blocky structure; loose, very friable, nonsticky and nonplastic; common fine and very fine roots; many very fine irregular pores; 10 percent pebbles; neutral.

Depth to the pumiceous 2Bw horizon is 12 to 20 inches. The particle-size control section is dominantly pyroclastic material and averages 50 to 95 percent pumice. The profile is slightly acid or neutral throughout.

The E horizon has value of 6 to 8 dry and 3 to 7 moist, and it has chroma of 1 or 2 dry or moist. It is 1 to 3 percent stones.

The Bw1, Bw2, and Bw3 horizons have value of 6 or 7 dry and 3 to 5 moist, and they have chroma of 2 to 4 dry or moist. They are very fine sandy loam, very cindery sandy loam, cindery sandy loam, very cindery fine sandy loam, extremely cindery sandy loam, cindery fine sandy loam, or cindery very fine sandy loam.

The 2Bw4, 2Bw5, 3B/C and 4Bw6 horizons have hue of 10YR or 2.5Y, value of 6 to 8 dry and 5 to 8 moist, and chroma of 1 to 8 dry or moist. They average 50 to 95 percent pumice.

The 5Bw7b horizon has value of 6 or 7 dry and 5 or 6 moist, and it has chroma of 2 to 6 dry or moist. It is 0 to 15 percent pumice. It is extremely gravelly loamy sand, very gravelly loamy sand, sandy loam, or gravelly sandy loam.

Reggad Series

The Reggad series consists of very deep, excessively drained soils on mountain slopes. These soils formed in an admixture of volcanic ash and organic material and pumice over rubble. Slope is 45 to 90 percent. Elevation is 3,300 to 5,600 feet. The average annual precipitation is 70 to 120 inches, the average annual air temperature is 38 to 41 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Reggad extremely stony muck, 45 to 90 percent slopes, 300 feet east and 50 feet north of the southwest corner of sec. 23, T. 26 N., R. 14 E.

Oi—1 inch to 0; undecomposed leaves, twigs, and mosses.

Oa1—0 to 2 inches; very dark gray (10YR 3/1) extremely stony muck, black (10YR 2/1) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; common very fine tubular pores; 20 percent pebbles, 20 percent cobbles, and 30 percent stones; 15 to 25 percent surface stones; very strongly acid; clear smooth boundary.

Oa2—2 to 9 inches; very dark grayish brown (10YR 3/2) extremely stony muck, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; common very fine tubular pores; 20 percent pebbles, 20 percent cobbles, and 35 percent stones; very strongly acid; abrupt irregular boundary.

2C—9 to 60 inches; dark yellowish brown (10YR 4/4) angular rock fragments with coarse sand partially filling some voids, dark yellowish brown (10YR 3/4) moist; 20 percent pebbles, 20 percent cobbles, and 55 percent stones; strongly acid.

Depth to the 2C horizon is 7 to 10 inches.

The Oa horizon has value of 3 or 4 dry and 2 or 3 moist, and it has chroma of 1 or 2 dry or moist. It is 60 to 80 percent rock fragments.

The 2C horizon has value of 4 or 5 dry. It is 70 to 95 percent rock fragments with little, if any, fines.

Safety Series

The Safety series consists of moderately deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from granite mixed with volcanic ash and loess. Slope is 8 to 90 percent. Elevation is 1,700 to 3,800 feet. The average annual precipitation is 15 to 25 inches, the average annual air temperature is 46 to 48 degrees F, and the frost-free season at 32 degrees is 100 to 130 days.

Typical pedon of Safety stony sandy loam, 30 to 60 percent slopes, 500 feet south of the northeast corner of sec. 36, T. 29 N., R. 21 E.

A1—0 to 3 inches; grayish brown (10YR 5/2) stony sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; common very fine roots; few very fine tubular pores; 5 percent pebbles and 5 percent stones; 3 percent surface stones; neutral; clear wavy boundary.

A2—3 to 11 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; 5 percent pebbles; neutral; clear wavy boundary.

Bw—11 to 24 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine roots; few very fine and fine tubular pores; 5 percent pebbles; neutral; abrupt wavy boundary.

Cr—24 to 34 inches; light gray, yellowish brown, and gray (10YR 7/2, 5/4, and 5/1) weathered granite that crumbles to very gravelly coarse sand; neutral.

Depth to weathered bedrock is 20 to 40 inches. The particle-size control section is 5 to 25 percent rock fragments. The profile is slightly acid or neutral throughout.

The A1 horizon has chroma of 2 or 3 dry or moist. It is 5 to 15 percent rock fragments. Surface stones and boulders range from 1 to 3 percent.

The A2 horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist. It is sandy loam or gravelly sandy loam. It is 5 to 20 percent rock fragments.

The Bw horizon has chroma of 3 or 4 dry or moist. It is sandy loam, gravelly fine sandy loam, or gravelly coarse sandy loam. It is 5 to 25 percent rock fragments.

Saska Series

The Saska series consists of very deep, well drained soils on mountainsides, footslopes, terraces, and terrace escarpments. These soils formed in volcanic ash and pumice over glacial till. Slope is 3 to 60 percent. Elevation is 2,000 to 4,200 feet. The average annual precipitation is 35 to 65 inches, the average annual air temperature is 39 to 45 degrees F, the frost-free season at 32 degrees is 80 to 130 days.

Typical pedon of Saska stony sandy loam, 30 to 60 percent slopes, 1,600 feet south and 2,300 feet east of the northwest corner of sec. 13, T. 26 N., R. 16 E.

Oi and Oe—2 inches to 0; undecomposed and partially decomposed forest litter.

E—0 to 0.5 inch; light gray (10YR 7/1) stony loamy sand, dark gray (10YR 4/1) moist; single grain; loose; 10 percent pebbles and 5 percent stones; abrupt broken boundary.

Bs1—0.5 inch to 6 inches; brown (10YR 5/3) stony sandy loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; common very fine tubular pores; 10 percent pebbles and 5 percent stones; slightly acid; clear wavy boundary.

Bs2—6 to 16 inches; light yellowish brown (10YR 6/4) sandy loam, dark brown (7.5YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and medium and few coarse roots; common very fine tubular pores; 10 percent pebbles; slightly acid; abrupt wavy boundary.

2C1—16 to 36 inches; light brownish gray (2.5Y 6/2) very stony sandy loam, dark grayish brown (2.5Y 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; few fine, medium, and coarse roots; common very fine tubular pores; 15 percent pebbles, 15 percent cobbles, 15 percent stones, and 5 percent boulders; moderately acid; gradual wavy boundary.

2C2—36 to 60 inches; light gray (2.5Y 7/2) very stony sandy loam, grayish brown (2.5Y 5/2) moist; massive; hard, friable, nonsticky and nonplastic; few coarse roots; few very fine tubular pores; 15 percent pebbles, 10 percent cobbles, 15 percent stones, and 5 percent boulders; moderately acid.

The mantle of volcanic ash is 14 to 36 inches thick and is more than 60 percent volcanic ash. The 2C horizon is 40 to 75 percent rock fragments. The profile is moderately acid to neutral.

The E horizon, where present, has value of 6 or 7 dry and 3 to 5 moist, and it has chroma of 1 or 2 dry or moist. It is stony, bouldery, or very bouldery.

The Bs horizon has hue of 10YR or 7.5YR, value of 5 or 6 dry and 3 to 5 moist, and chroma of 2 to 4 dry or moist. It is sandy loam, fine sandy loam, gravelly sandy loam, or loamy sand and is 0 to 3 percent stones and boulders.

The 2C horizon has hue of 10YR or 2.5Y, value of 5 to 7 dry and 4 to 6 moist, and chroma of 2 to 4 dry or moist. It is gravelly sandy loam, very cobbly sandy loam, very stony sandy loam, extremely cobbly sandy loam, extremely stony sandy loam, or extremely gravelly sandy loam.

Saydab Series

The Saydab series consists of moderately deep, moderately well drained soils on broad ridgetops and mountains. These soils formed in loess and volcanic ash mixed with colluvium and residuum derived from basalt. Slope is 3 to 30 percent. Elevation is 5,500 to 6,200 feet. The average annual precipitation is 25 to 35 inches, the average annual air temperature is 39 to 42 degrees F, and the frost-free season at 32 degrees F is 65 to 100 days.

Typical pedon of Saydab extremely stony loam, 3 to 30 percent slopes, 1,100 feet north of the center of sec. 36, T. 21 N., R. 19 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 8 inches; dark grayish brown (10YR 4/2) extremely stony loam, very dark brown (10YR 2/2) moist; weak medium granular structure; soft, very friable, slightly sticky and slightly plastic; many fine roots; common fine tubular pores; 20 percent pebbles, 20 percent cobbles, and 25 percent stones; 25 to 35 percent surface stones; moderately acid; clear wavy boundary.

Bw1—8 to 13 inches; yellowish brown (10YR 5/4) very cobbly loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common fine roots; many fine tubular pores; 20 percent pebbles, 30 percent cobbles, and 10 percent stones; moderately acid; gradual wavy boundary.

Bw2—13 to 27 inches; light yellowish brown (10YR 6/4) very cobbly loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; common fine roots; many fine tubular pores; 20 percent pebbles, 30 percent cobbles, and 5 percent stones; slightly acid; gradual wavy boundary.

C—27 to 38 inches; light yellowish brown (10YR 6/4) very cobbly loam, dark yellowish brown (10YR 3/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; few fine roots; few fine tubular pores; 20 percent pebbles, 30 percent cobbles, and 5 percent stones; slightly acid; abrupt smooth boundary.

R—38 to 42 inches; unweathered basalt.

Depth to unweathered bedrock is 20 to 40 inches. The particle-size control section averages 35 to 60 percent rock fragments and is 30 to 60 percent volcanic ash.

The A horizon has hue of 10YR or 7.5YR, value of 4 or 5 dry and 2 or 3 moist, and chroma of 2 or 3 dry or moist. It is moderately acid or slightly acid.

The Bw horizon has hue of 10YR or 7.5YR, value of 5 to 7 dry and 3 or 4 moist, and chroma of 3 or 4 dry or moist. It is very cobbly loam or very cobbly silt loam. It is slightly acid to strongly acid.

The C horizon has value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is very cobbly loam or very cobbly silt loam. It is slightly acid to strongly acid.

Scotties Series

The Scotties series consists of deep, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from sandstone with a thin mantle of volcanic ash. Slope is 30 to 60 percent. Elevation is 2,000 to 4,800 feet. The average annual precipitation is 22 to 40 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Scotties gravelly loam, 30 to 60 percent slopes, 300 feet west and 300 feet north of the southeast corner of sec. 36, T. 22 N., R. 17 E.

Oi—1 inch to 0; undecomposed forest litter.
Bw1—0 to 10 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; many fine and medium tubular pores; 15 percent pebbles and 2 percent cobbles; slightly acid; gradual smooth boundary.
2Bw2—10 to 18 inches; light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; many fine and medium tubular pores; 15 percent pebbles and 2 percent cobbles; slightly acid; clear smooth boundary.
2C1—18 to 30 inches; yellowish brown (10YR 5/6) very gravelly loam, dark yellowish brown (10YR 3/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; common fine roots; many medium and coarse tubular pores; 30 percent pebbles and 10 percent cobbles; slightly acid; gradual smooth boundary.
2C2—30 to 44 inches; light yellowish brown (10YR 6/4) extremely cobbly sandy loam, dark brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine and medium roots; common fine and medium tubular pores; 20 percent pebbles and 45 percent cobbles; slightly acid; abrupt wavy boundary.
2R—44 to 48 inches; unweathered sandstone.

The upper 7 to 12 inches is dominantly volcanic ash. The particle-size control section averages 5 to 18 percent clay and is 35 to 80 percent rock fragments. Depth to unweathered bedrock is 40 to 60 inches. The profile is moderately acid to neutral. Some pedons have a thin A horizon.

The Bw1 horizon has value of 5 or 6 dry, and it has chroma of 1 to 4 dry and 3 or 4 moist. The fine-earth fraction is more than 60 percent volcanic ash. The horizon is 15 to 30 percent pebbles and 0 to 5 percent cobbles.

The 2Bw horizon has value of 5 or 6 dry and chroma of 3 or 4 dry or moist. It is gravelly loam, very gravelly sandy loam, or very gravelly loam. It is 15 to 45 percent pebbles and 0 to 5 percent cobbles.

The 2C horizon has hue of 10YR or 2.5Y, value of 5 to 7 dry and 3 to 5 moist, and chroma of 3 to 6 dry and 3 or 4 moist. The upper part is very gravelly sandy loam or very gravelly loam and is 35 to 60 percent rock fragments, and the lower part is extremely cobbly sandy loam, very gravelly sandy loam, or very cobbly loam and is 60 to 80 percent rock fragments.

Serene Series

The Serene series consists of moderately deep, well drained soils on ridgetops and mountainsides. These soils formed in volcanic ash mixed with colluvium derived from granite and granodiorite. Slope is 30 to 90 percent. Elevation is 3,000 to 6,000 feet. The average annual precipitation is 70 to 120 inches, the average annual air temperature is 38 to 41 degrees F, and frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Serene gravelly sandy loam, 30 to 60 percent slopes, 1,800 feet south and 500 feet east of the northwest corner of sec. 36, T. 27 N., R. 14 E.

Oi—2 inches to 0; undecomposed forest litter.

E—0 to 1.5 inches; pinkish white (7.5YR 8/2) gravelly loamy fine sand, pinkish gray (7.5YR 7/2) moist; weak fine and medium granular structure; soft, very friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; 10 percent pebbles and 5 percent cobbles; moderately acid; abrupt smooth boundary.

Bhs1—1.5 to 4 inches; brown (7.5YR 5/4) gravelly sandy loam, reddish brown (5YR 4/4) moist; weak medium granular structure; slightly hard, very friable, nonsticky and nonplastic; moderately smeary; many fine, medium, and coarse roots; many fine and very fine tubular pores; 10 percent pebbles and 5 percent cobbles; moderately acid; clear wavy boundary.

Bhs2—4 to 8 inches; reddish yellow (7.5YR 6/6) gravelly sandy loam, reddish brown (5YR 5/4) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; moderately smeary; many fine, medium, and coarse roots; many fine and very fine tubular pores; 15 percent pebbles and 5 percent cobbles; moderately acid; gradual wavy boundary.

Bs—8 to 13 inches; reddish yellow (7.5YR 6/6) cobbly sandy loam, strong brown (7.5YR 5/6) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; moderately smeary; common fine and medium roots; common very fine, fine, and medium tubular pores; 20 percent pebbles, 20 percent soft pebbles, 10 percent cobbles, and 5 percent stones; slightly acid; gradual wavy boundary.

C—13 to 24 inches; light yellowish brown (10YR 6/4) very cobbly loamy coarse sand, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; 20 percent pebbles, 20 percent soft pebbles, 10 percent cobbles, 3 percent stones, and 5 percent boulders; slightly acid; clear wavy boundary.

Cr—24 to 34 inches; weathered granodiorite.

Depth to weathered bedrock is 20 to 40 inches. The particle-size control section is 35 to 70 percent rock fragments.

The E horizon has chroma of 1 or 2 dry or moist. It is strongly acid or moderately acid.

The Bhs horizon has hue of 7.5YR or 5YR, value of 5 or 6 dry and 4 or 5 moist, and chroma of 4 to 6 dry or moist. It is gravelly sandy loam or cobbly sandy loam. It is strongly acid or moderately acid.

The Bs horizon has hue of 7.5YR or 5YR, value of 5 or 6 dry and 4 or 5 moist, and chroma of 4 to 6 dry or moist. It is gravelly sandy loam, cobbly sandy loam, very cobbly loamy sand, or very cobbly sandy loam. It is strongly acid or moderately acid.

The C horizon has chroma of 4 to 6 dry or moist. It is very gravelly loamy coarse sand, extremely cobbly loamy sand, very gravelly loam, or very gravelly sand. It is strongly acid to slightly acid.

Serpen Series

The Serpen series consists of deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from serpentine with minor amounts of volcanic ash and loess. Slope is 15 to 60 percent. Elevation is 2,500 to 4,500 feet. The average annual precipitation is 25 to 40 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 90 to 130 days.

Typical pedon of Serpen very gravelly loam, 30 to 60 percent slopes, 1,640 feet south and 1,500 feet west of the northeast corner of sec. 11, T. 22 N., R. 17 E.

A—0 to 10 inches; yellowish brown (10YR 5/4) very gravelly loam, dark brown (10YR 3/3) moist; weak medium granular structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; common fine tubular pores; 50 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.
Bt1—10 to 18 inches; light yellowish brown (10YR 6/4) very gravelly clay loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, firm, sticky and plastic; many fine and medium roots; common medium and coarse tubular pores; 50 percent pebbles and 5 percent cobbles; neutral; gradual smooth boundary.
Bt2—18 to 27 inches; brown (10YR 5/3) extremely gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, very firm, sticky and plastic; common fine and medium roots; common medium and coarse tubular pores; 60 percent pebbles and 10 percent cobbles; neutral; clear smooth boundary.
Bt3—27 to 34 inches; yellowish brown (10YR 5/4) extremely gravelly clay loam, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; very hard, very firm, very sticky and very plastic; very few fine roots; very few fine tubular pores; 75 percent pebbles and 5 percent cobbles; neutral; abrupt smooth boundary.
C—34 to 48 inches; grayish brown (10YR 5/2) extremely gravelly clay loam, dark grayish brown (10YR 4/2) moist; massive; very hard, very firm, very sticky and very plastic; very few fine roots; few very fine tubular pores; 80 percent pebbles and 5 percent cobbles; neutral; gradual wavy boundary.
R—48 to 52 inches; unweathered serpentine.

The particle-size control section averages 35 to 80 percent rock fragments. Depth to unweathered bedrock is 40 to 60 inches. The profile is neutral or slightly alkaline.

The A horizon has chroma of 2 to 4 dry and 2 or 3 moist.

The Bt horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry or moist. It is very gravelly clay loam or extremely gravelly clay loam.

The C horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 2 to 4 dry or moist. It is very gravelly clay loam or extremely gravelly clay loam.

Shadypass series

The Shadypass series consists of very deep, well drained soils on mountainsides. These soils formed in volcanic ash and pumice. Slope is 30 to 60 percent. Elevation is 4,800 to 6,500 feet. The average annual precipitation is 35 to 45 inches, the average annual air temperature is 37 to 40 degrees F, and the frost-free season at 32 degrees is 85 to 105 days.

Typical pedon of Shadypass very cindery sandy loam, 30 to 60 percent slopes, 1,750 feet south and 100 feet west of the northeast corner of sec. 27, T. 29 N., R. 19 E.

A—0 to 3 inches; light brownish gray (10YR 6/2) very cindery sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; 35 percent pumice; neutral; gradual wavy boundary.
Bw—3 to 19 inches; light gray (10YR 7/2) very cindery coarse sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; 50 percent pumice; neutral; gradual wavy boundary.

C—19 to 60 inches; yellow (10YR 7/6) cinders, yellowish brown (10YR 5/6) moist; single grain; loose; few very fine and fine roots; 90 percent pumice; neutral.

Depth to cinders is 15 to 30 inches.

The A horizon has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 2 or 3 dry and 2 to 4 moist. It is 35 to 60 percent pumice.

The Bw horizon has value of 3 to 6 moist and chroma of 2 to 6 dry and 3 to 6 moist. It is very cindery coarse sandy loam, very cindery sandy loam, extremely cindery coarse sandy loam, or extremely cindery sandy loam. It is 50 to 70 percent pumice. It is slightly acid or neutral.

The C horizon has value of 7 or 8 dry and 5 to 7 moist, and it has chroma of 3 to 6 dry. A stratified lens of loamy sand to sandy loam may be present in some pedons.

Shamel Series

The Shamel series consists of very deep, well drained soils on mountainsides. These soils formed in loess and volcanic ash mixed with colluvium derived from gneiss and schist. Slope is 30 to 90 percent. Elevation is 1,400 to 3,800 feet. The average annual precipitation is 16 to 20 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 100 to 130 days.

Typical pedon of Shamel sandy loam, 30 to 60 percent slopes, 1,200 feet west and 500 feet north of the southeast corner of sec. 22, T. 25 N., R. 20 E.

Oi—1 inch to 0; undecomposed needles, twigs, and leaves.

A1—0 to 11 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist and crushed; moderate fine granular and subangular blocky structure; soft, friable, slightly sticky and nonplastic; common fine and medium and few coarse roots; many fine and medium tubular pores; 5 percent pebbles; slightly acid; gradual wavy boundary.

A2—11 to 17 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist, very dark grayish brown (10YR 3/2) moist and crushed; moderate fine granular and subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium and few coarse roots; many fine and medium tubular pores; 5 percent pebbles; slightly acid; gradual wavy boundary.

Bw—17 to 38 inches; pale brown (10YR 6/3) loam, dark yellowish brown (10YR 4/4) moist, brown (10YR 4/3) moist and crushed; moderate medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few medium and coarse roots; many fine and medium tubular pores; 10 percent pebbles; slightly acid; gradual wavy boundary.

C—38 to 60 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist and crushed; massive; slightly hard, firm, slightly sticky and nonplastic; few coarse roots; many fine and medium and few coarse tubular pores; 20 percent pebbles; neutral.

The particle-size control section averages 5 to 35 percent rock fragments. The profile is slightly acid or neutral.

The A horizon has value of 4 or 5 dry and chroma of 1 to 3 dry or moist. The A2 horizon is fine sandy loam, loam, sandy loam, or gravelly sandy loam.

The Bw horizon has value of 5 to 7 dry and chroma of 2 to 4 dry or moist. It is fine sandy loam, loam, sandy loam, or gravelly sandy loam.

The C horizon has value of 5 to 7 dry and chroma of 2 to 4 dry or moist. It is loam, fine sandy loam, sandy loam, or gravelly sandy loam.

Shaser Series

The Shaser series consists of very deep, well drained soils on mountainsides. These soils formed in volcanic ash over residuum and colluvium derived from sandstone. Slope is 30 to 60 percent. Elevation is 2,000 to 4,900 feet. The average annual precipitation is 22 to 40 inches, the average annual air temperature is 42 to 46 degrees F, and the frost-free season at 32 degrees is 85 to 130 days.

Typical pedon of Shaser fine sandy loam in area of Shaser-Chapot complex, 30 to 60 percent slopes, 1,600 feet west and 2,150 feet north of the southeast corner of sec. 15, T. 22 N., R. 17 E.

Oi—1 inch to 0; undecomposed needles and twigs.

E—0 to 0.5 inch; gray (10YR 6/1) fine sandy loam, dark gray (10YR 4/1) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; few fine roots; few fine tubular pores; 5 percent pebbles; slightly acid; abrupt smooth boundary.

Bw1—0.5 inch to 9 inches; light yellowish brown (10YR 6/4) fine sandy loam, dark brown (10YR 4/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many medium and fine roots; few very fine tubular pores; 5 percent pebbles; slightly acid; gradual wavy boundary.

Bw2—9 to 18 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common medium roots; common fine and very fine tubular pores; 15 percent pebbles, 5 percent cobbles, and 5 percent soft pebbles; slightly acid; gradual wavy boundary.

2Bt1—18 to 30 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, very firm, sticky and plastic; few medium roots; many fine and medium tubular pores; 30 percent pebbles, 5 percent cobbles, and 10 percent soft pebbles; slightly acid; gradual wavy boundary.

2Bt2—30 to 46 inches; yellowish brown (10YR 5/6) extremely gravelly clay loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; very hard, very firm, very sticky and plastic; very few medium roots; few fine and medium tubular pores; 50 percent pebbles, 10 percent cobbles, and 10 percent soft pebbles; slightly acid; gradual wavy boundary.

2C—46 to 60 inches; yellowish brown (10YR 5/6) and brown (7.5YR 5/4) very gravelly clay loam, dark brown (10YR 4/3) and (7.5YR 4/4) moist; massive; very hard, very firm, very sticky and very plastic; very few medium roots; few fine and medium tubular pores; 20 percent pebbles, 10 percent cobbles, 5 percent stones, and 10 percent soft pebbles; slightly acid.

The particle-size control section averages 35 to 60 percent rock fragments. The upper 14 to 24 inches of the solum is 30 to 60 percent volcanic ash. The profile is slightly acid or neutral.

The E horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 1 or 2 dry or moist.

The Bw horizon has value of 5 to 7 dry and 4 or 5 moist, and chroma of 3 or 4 dry and 3 to 5 moist. The lower part is fine sandy loam, gravelly loam, or very gravelly loam.

The 2Bt horizon has value of 5 to 7 dry and 4 or 5 moist, and it has chroma of 3 to 8 dry or moist. It is extremely gravelly clay loam, very gravelly clay loam, or very gravelly sandy clay loam.

The C horizon has hue of 10YR or 7.5YR, value of 4 to 6 dry or moist, and chroma of 3 or 4 dry or moist. It is very gravelly clay loam, extremely gravelly clay loam, or very gravelly sandy clay loam.

Skipeak Series

The Skipeak series consists of very deep, somewhat excessively drained soils on glacial outwash terraces. These soils formed in volcanic ash over glacial outwash. Slope is 5 to 30 percent. Elevation is 1,800 to 2,500 feet. The average annual precipitation is 70 to 100 inches, the average annual air temperature is 40 to 42 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Skipeak gravelly sandy loam, 5 to 30 percent slopes, 1,000 feet west and 500 feet south of the northeast corner of sec. 16, T. 33 N., R. 16 E.

Oi—2 inches to 1 inch; undecomposed forest litter.

Oe—1 inch to 0; partially decomposed forest litter.

E—0 to 2 inches; pinkish gray (7.5YR 6/2) loamy fine sand, brown (7.5YR 5/2) moist; weak very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; nonsmeary; common very fine, fine, medium, and coarse roots; few fine tubular pores; 5 percent pebbles; strongly acid; abrupt wavy boundary.

Bs1—2 to 7 inches; brown (7.5YR 4/4) gravelly sandy loam, dark brown (7.5YR 3/5) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; weakly smeary; common very fine and few medium and coarse roots; few fine tubular pores; 20 percent pebbles; strongly acid; gradual wavy boundary.

Bs2—7 to 17 inches; strong brown (7.5YR 5/6) very gravelly sandy loam, strong brown (7.5YR 4/6) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; weakly smeary; common very fine and fine and few medium roots; few fine tubular pores; 30 percent pebbles and 5 percent cobbles; moderately acid; gradual wavy boundary.

2CB—17 to 30 inches; light yellowish brown (10YR 6/4) very gravelly loamy sand, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; few fine and medium roots; 35 percent pebbles and 5 percent cobbles; slightly acid; clear wavy boundary.

2C—30 to 60 inches; pale yellow (2.5Y 7/4) very gravelly loamy sand, light olive brown (2.5Y 5/4) moist; single grain; loose, nonsticky and nonplastic; weakly smeary; few fine and medium roots; 40 percent pebbles and 10 percent cobbles; slightly acid.

The upper part of the particle-size control section averages 35 to 40 percent rock fragments, and the lower part is 50 to 60 percent rock fragments.

The E horizon, where present, has hue of 7.5YR or 10YR, value of 5 or 6 dry and 3 to 5 moist, and chroma of 0 to 2 dry or moist. It is 0 to 10 percent rock fragments. It is strongly acid or moderately acid.

The Bs horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 4 to 6 dry or moist. It is gravelly sandy loam, very gravelly sandy loam, or very gravelly loam. It is 15 to 40 percent rock fragments. It is strongly acid or moderately acid. Some pedons also have a Bw horizon.

The 2BC and 2C horizons have hue of 10YR or 2.5Y, value of 5 to 7 dry and 3 to 5 moist, and chroma of 4 to 6 dry or moist. They are very gravelly loamy sand or very gravelly sand and are 45 to 60 percent rock fragments. They are slightly acid or neutral.

Soda Series

The Soda series consists of deep and very deep, well drained soils on mountainsides and toeslopes. These soils formed in volcanic ash and pumice over glacial till. Slope is 3 to 90 percent. Elevation is 2,100 to 5,800 feet. The average annual precipitation is 65 to 110 inches, the average annual air temperature is 39 to 43 degrees F, and the frost-free season at 32 degrees is 55 to 110 days.

Typical pedon of Soda bouldery sandy loam, 30 to 60 percent slopes; 1,200 feet south and 1,600 feet west of the northeast corner of sec. 30, T. 26 N., R. 16 E.

Oi—1 inch to 0; undecomposed forest litter.

E—0 to 3 inches; light gray (10YR 7/1) bouldery sandy loam, gray (10YR 6/1) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common fine, medium, and coarse roots; common fine and medium tubular pores; 5 percent cobbles and 10 percent stones; 3 percent surface boulders; moderately acid; abrupt wavy boundary.

Bs1—3 to 10 inches; brown (7.5YR 5/4) gravelly fine sandy loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine, medium, and coarse roots; few fine and very fine spherical pores; 15 percent pebbles; moderately acid; clear wavy boundary.

Bs2—10 to 18 inches; pale brown (10YR 6/3) gravelly fine sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few medium and coarse roots; few fine tubular pores; 15 percent pebbles and 1 percent cobbles; moderately acid; gradual wavy boundary.

BC—18 to 28 inches; pale brown (10YR 6/3) very gravelly fine sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; few medium roots; few fine tubular pores; 25 percent pebbles and 15 percent cobbles; slightly acid; clear wavy boundary.

2C—28 to 60 inches; light brownish gray (10YR 6/2) extremely stony fine sandy loam, grayish brown (10YR 5/2) moist; massive; soft, friable, nonsticky and nonplastic; few medium and coarse roots; few fine and medium tubular pores; 20 percent pebbles, 20 percent cobbles, and 20 percent stones; slightly acid.

Depth to dense glacial till is 40 to 60 inches or more, and depth to the loamy-skeletal 2C horizon is 14 to 30 inches. The upper 14 to 30 inches of the particle-size control section is dominantly amorphous material and averages 10 to 35 percent rock fragments and 0 to 10 percent pumice.

The E horizon has value of 6 or 7 dry and 3 to 5 moist, and it has chroma of 1 to 3 dry or moist. It is moderately acid to neutral.

The Bs horizon has value of 4 to 6 dry and 3 to 5 moist, and it has chroma of 3 to 6 dry or moist. It is sandy loam, fine sandy loam, gravelly sandy loam, cobbly sandy loam, gravelly fine sandy loam, or stony fine sandy loam. It is moderately acid to neutral.

The BC horizon has value of 4 to 7 dry and 4 or 5 moist, and it has chroma of 2 to 6 dry or moist. It is very gravelly fine sandy loam, very stony sandy loam, very cobbly fine sandy loam, or very cobbly sandy loam. It is slightly acid or neutral.

The 2C horizon has hue of 10YR or 2.5Y, value of 5 or 6 dry and 3 to 5 moist, and chroma of 2 to 4 dry or moist. It averages 40 to 70 percent rock fragments. It is extremely stony fine sandy loam, extremely cobbly fine sandy loam, very cobbly sandy loam, or very cobbly loamy sand. It is slightly acid or neutral.

Sodacreek Series

The Sodacreek series consists of very deep, moderately well drained soils on mountain slopes and in valleys. These soils formed in colluvium and landslide material derived from mica schist mixed with volcanic ash. Slope is 25 to 90 percent. Elevation is 2,100 to 4,900 feet. The average annual precipitation is 75 to 85 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 80 to 115 days.

Typical pedon is Sodacreek bouldery fine sandy loam, 25 to 45 percent slopes, 1,000 feet south and 300 feet west of the center of sec. 11, T. 27 N., R. 15 E.

Oi—1 inch to 0; undecomposed forest litter.

E—0 to 0.25 inch; gray (10YR 6/1) bouldery fine sandy loam, dark gray (10YR 4/1) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; few very fine roots; few fine tubular pores; 3 percent boulders; neutral; abrupt smooth boundary.

Bw1—0.25 inch to 9 inches; pale brown (10YR 6/3) bouldery fine sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many fine, medium, and coarse roots; common fine and medium tubular pores; 5 percent pebbles, 5 percent soft pebbles, 5 percent cobbles, and 10 percent boulders; slightly acid; gradual wavy boundary.

Bw2—9 to 20 inches; pale brown (10YR 6/3) gravelly fine sandy loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; many fine and medium tubular pores; 15 percent pebbles, 10 percent soft pebbles, and 5 percent cobbles; neutral; gradual wavy boundary.

2C—20 to 60 inches; very pale brown (10YR 7/3) very gravelly fine sandy loam, pale brown (10YR 6/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common fine and medium roots; few fine tubular pores; 25 percent pebbles, 10 percent soft pebbles, 10 percent cobbles, 5 percent soft cobbles, 5 percent stones, and 5 percent boulders; neutral.

The particle-size control section averages 35 to 60 percent rock fragments. An apparent water table is present in January through December, and it is at a depth of 4 to 6 feet.

The E horizon has value of 6 or 7 dry and 4 to 6 moist, and it has chroma of 1 or 2 dry or moist. It is moderately acid to neutral.

The Bw horizon has hue of 7.5YR or 10YR, value of 5 or 6 dry and 4 or 5 moist, and chroma of 2 to 4 dry or moist. It is gravelly fine sandy loam, bouldery fine sandy loam, or gravelly sandy loam. It is moderately acid to neutral.

The 2C horizon has hue of 2.5Y or 10YR, value of 6 or 7 dry and 4 to 6 moist, and chroma of 1 to 4 dry or moist. It is very gravelly fine sandy loam or very stony silt loam.

Spodic Vitrixerands

Spodic Vitrixerands consists of very deep, somewhat poorly drained and moderately well drained soils on terraces, escarpments, and mountainsides. These soils formed in volcanic ash over glacial lake sediment. Slope is 3 to 60 percent. Elevation is 2,400 to 3,600 feet. The average annual precipitation is 50 to 55 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 80 to 110 days.

Typical pedon of Spodic Vitrixerands in an area of Spodic Vitrixerands-Saska complex, 30 to 60 percent slopes, 1,900 feet east and 1,600 feet north of the southwest corner of sec. 13, T. 26 N., R. 16 E.

Oi—1 inch to 0; undecomposed forest litter.

Bs1—0 to 3 inches; grayish brown (10YR 5/2) sandy loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; few very fine and fine tubular pores; 5 percent pumice; neutral; clear smooth boundary.

Bs2—3 to 7 inches; light yellowish brown (10YR 6/4) sandy loam, dark brown (7.5YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; few very fine and fine tubular pores; 5 percent pumice; neutral; clear wavy boundary.

Bs3—7 to 17 inches; pale brown (10YR 6/3) loamy sand, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; few very fine and fine tubular pores; 5 percent pumice; neutral; abrupt wavy boundary.

2C1—17 to 25 inches; light gray (2.5Y 7/2) very fine sandy loam, olive brown (2.5Y 4/4) moist; common fine faint reddish yellow (7.5YR 6/6) mottles, dark brown (7.5YR 4/4) moist; massive; slightly hard, friable, nonsticky and slightly plastic; few fine and medium roots; common very fine tubular pores; slightly acid; gradual wavy boundary.

2C2—25 to 39 inches; light gray (2.5Y 7/2) silt loam, olive brown (2.5Y 4/4) moist; common fine distinct reddish yellow (7.5YR 6/6) mottles, dark brown (7.5YR 4/4) moist; massive; slightly hard, friable, nonsticky and slightly plastic; few very fine roots; few very fine tubular pores; moderately acid; gradual wavy boundary.

2C3—39 to 60 inches; light gray (2.5Y 7/2) very fine sandy loam, olive brown (2.5Y 4/4) moist; many medium distinct reddish yellow (7.5YR 6/6) mottles, dark brown (7.5YR 4/4) moist; massive; slightly hard, friable, nonsticky and slightly plastic; very few fine roots; common very fine tubular pores; moderately acid.

The particle-size control section is 0 to 5 percent rock fragments and 0 to 10 percent pumice. Some pedons have a thin E horizon. An apparent water table is present in January through July, and it is at its highest level (0.3 to 0.6 foot) in March and April.

The Bs horizon has hue of 7.5YR or 10YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 2 to 4 dry and 3 or 4 moist. It is sandy loam or loamy sand. It is slightly acid or neutral.

The 2C horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 2 or 3 dry and 3 or 4 moist. It has faint to distinct mottles. It is very fine sandy loam or silt loam. Some pedons have thin stratified layers of loamy sand, fine sand, or sand. The horizon is moderately acid or slightly acid.

Stemilt Series

The Stemilt series consists of very deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from basalt mixed with loess and volcanic ash in the upper part. Slope is 3 to 60 percent. Elevation is 3,000 to 4,900 feet. The average annual precipitation is 20 to 25 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Stemilt stony loam, 30 to 60 percent slopes, 900 feet east and 350 feet south of the northwest corner of sec. 25, T. 21 N., R. 19 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 10 inches; grayish brown (10YR 5/2) stony loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine, medium, and coarse roots; many fine tubular pores; 15 percent pebbles, 5 percent cobbles, and 5 percent stones; 3 percent surface stones; neutral; clear smooth boundary.

AB—10 to 18 inches; brown (10YR 5/3) cobbly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; common fine and medium roots; many fine tubular pores; 10 percent pebbles, 15 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

Bt—18 to 36 inches; yellowish brown (10YR 5/4) very cobbly clay loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, very firm, sticky and plastic; few fine roots; many fine and very fine tubular pores; few faint clay films on faces of peds; 15 percent pebbles, 30 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

BCt—36 to 60 inches; yellowish brown (10YR 5/4) very cobbly clay loam, dark yellowish brown (10YR 4/4) moist; massive; hard, very firm, sticky and plastic; few fine roots; common fine and medium tubular pores; few faint clay films on faces of peds; 15 percent pebbles, 35 percent cobbles, and 5 percent stones; neutral.

The particle-size control section is 27 to 35 percent clay and 35 to 60 percent rock fragments.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist.

The AB horizon has value of 4 to 6 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist. It is cobbly loam or very cobbly loam.

The Bt horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is very cobbly clay loam or extremely cobbly clay loam.

The BC horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 4 to 6 dry or moist. It is very cobbly clay loam or extremely cobbly clay loam.

Surgh Series

The Surgh series consists of deep and very deep, well drained soils on mountain slopes and alluvial fans. These soils formed in residuum, colluvium, and alluvium derived from gneiss, schist, and granite with a mantle of volcanic ash. Slope is 3 to 90 percent. Elevation is 2,700 to 5,500 feet. The average annual precipitation is 25 to 40 inches, the average annual air temperature is 37 to 40 degrees F, and the frost-free season at 32 degrees is 60 to 100 days.

Typical pedon of Surgh fine sandy loam, 30 to 60 percent slopes, 1,500 feet east and 1,200 feet south of the northwest corner of sec. 36, T. 25 N., R. 19 E.

Oi—1 inch to 0; partially decomposed forest litter.

E—0 to 0.25 inch; white (10YR 8/1) fine sandy loam, light gray (10YR 7/1) moist; weak fine granular structure; soft, friable, nonsticky and nonplastic; many fine and medium tubular pores; 5 percent pebbles; moderately acid; abrupt smooth boundary.

Bw1—0.25 inch to 3 inches; pale brown (10YR 6/3) fine sandy loam, dark brown (10YR 4/3) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; common fine and medium roots; many fine and medium tubular pores; 5 percent pebbles; slightly acid; gradual wavy boundary.

Bw2—3 to 13 inches; pale brown (10YR 6/3) gravelly fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many fine, medium, and coarse roots; many fine, medium, and coarse tubular pores; 30 percent pebbles; slightly acid; diffuse wavy boundary.

2Bw3—13 to 21 inches; light yellowish brown (10YR 6/4) very gravelly sandy loam, yellowish brown (10YR 5/6) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many fine, medium, and coarse roots; many fine, medium, and coarse tubular pores; 50 percent pebbles, 5 percent cobbles, and 10 percent soft pebbles; slightly acid; diffuse wavy boundary.

2C—21 to 46 inches; light yellowish brown (10YR 6/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, friable, nonsticky and nonplastic; few medium and coarse roots; many fine, medium, and coarse tubular pores; 55 percent pebbles, 5 percent cobbles, 5 percent stones, and 10 percent soft pebbles; moderately acid; abrupt wavy boundary.

R—46 to 50 inches; fractured unweathered gneiss.

Depth to unweathered bedrock is 40 to 60 inches or more. The fine-earth fraction of the upper 7 to 13 inches is more than 60 percent volcanic ash. The particle-size control section averages 35 to 60 percent rock fragments and 0 to 15 percent soft schist or gneiss pebbles. Some pedons have a very bouldery surface.

The E horizon has value of 6 to 8 dry and 4 to 7 moist, and it has chroma of 1 or 2 dry or moist. It is strongly acid to slightly acid.

The Bw horizon has hue of 7.5YR or 10YR, value of 4 to 6 dry and 3 to 5 moist, and chroma of 3 to 6 dry or moist. It is fine sandy loam, gravelly fine sandy loam, or very bouldery fine sandy loam. It is moderately acid to neutral.

The 2Bw horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 4 to 6 dry or moist. It is extremely gravelly sandy loam, very gravelly sandy loam, very gravelly fine sandy loam, very cobbly sandy loam, or very stony fine sandy loam. It is moderately acid to neutral.

The 2C horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry or moist. It is extremely gravelly sandy loam, extremely gravelly coarse sandy loam, very stony sandy loam, or very gravelly sandy loam. It is moderately acid to neutral.

Swakane Series

The Swakane series consists of shallow, well drained soils on mountainsides. These soils formed in colluvium and residuum derived from gneiss, schist, and granodiorite mixed with volcanic ash and loess. Slope is 8 to 90 percent. Elevation is 1,100 to 3,600 feet. The average annual precipitation is 13 to 18 inches, the average annual air temperature is 47 to 49 degrees F, and the frost-free season at 32 degrees is 130 to 155 days.

Typical pedon of Swakane stony sandy loam, 30 to 60 percent slopes, 1,500 feet east and 900 feet south of the northwest corner of sec. 8, T. 25 N., R. 20 E.

A1—0 to 2 inches; dark brown (10YR 4/3) stony sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and few fine roots; few very fine interstitial and spherical pores; 15 percent pebbles, 5 percent cobbles, 5 percent stones, and 20 percent weathered pebbles; 2 percent surface stones; neutral; clear smooth boundary.

A2—2 to 15 inches; yellowish brown (10YR 5/4) very gravelly coarse sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and few very fine roots; few very fine interstitial pores; 30 percent pebbles, 15 percent cobbles, and 30 percent weathered pebbles; neutral; abrupt wavy boundary.

R—15 to 19 inches; fractured unweathered gneiss.

Depth to unweathered bedrock is 10 to 20 inches. The profile is 35 to 70 percent rock fragments.

The A1 horizon has value of 4 or 5 dry and chroma of 2 or 3 dry and 1 to 3 moist.

The A2 horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry and 2 or 3 moist. It is loam, coarse sandy loam, or sandy loam and is 35 to 70 percent rock fragments. It is slightly acid to slightly alkaline.

A C horizon is present in some pedons.

Switchback Series

The Switchback series consists of moderately deep, well drained soils on dominantly north-facing mountain slopes. These soils formed in colluvium and residuum derived from granodiorite mixed with loess and volcanic ash. Slope is 3 to 90 percent. Elevation is 1,800 to 3,000 feet. The average annual precipitation is 15 to 18 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Switchback gravelly fine sandy loam, 30 to 60 percent slopes, 1,800 feet east and 300 feet south of the northwest corner of sec. 20, T. 26 N., R. 20 E.

A—0 to 10 inches; grayish brown (10YR 5/2) gravelly fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, friable, nonsticky and nonplastic; many fine and medium roots; common fine tubular pores; 10 percent pebbles, 5 percent cobbles, and 5 percent soft pebbles; neutral; gradual wavy boundary.

Bw—10 to 20 inches; grayish brown (10YR 5/2) gravelly fine sandy loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; slightly hard, firm, nonsticky and nonplastic; many fine and medium roots; common fine tubular pores; 15 percent pebbles, 5 percent cobbles, and 10 percent soft pebbles; neutral; gradual wavy boundary.

C—20 to 26 inches; pale brown (10YR 6/3) gravelly sandy loam, grayish brown (10YR 5/2) moist; massive; slightly hard, firm, nonsticky and nonplastic; common fine and medium roots; many fine tubular pores; 25 percent pebbles, 5 percent cobbles, and 15 percent soft pebbles; neutral; abrupt wavy boundary.

Cr—26 to 36 inches; weathered granodiorite.

The particle-size control section averages 5 to 35 percent angular granitic pebbles and cobbles. Thickness of the solum is 16 to 24 inches. Depth to weathered bedrock is 20 to 40 inches.

The A horizon has value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist.

The Bw horizon has hue of 7.5YR or 10YR, value of 5 to 7 dry, and chroma of 2 or 3 dry or moist. It is gravelly fine sandy loam, loam, or gravelly loam.

The C horizon has hue of 7.5YR or 10YR and value of 5 to 7 dry or moist. It is gravelly sandy loam, gravelly coarse sandy loam, or gravelly loam.

Taneum Series

The Taneum series consists of deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from schist and gneiss mixed with loess and volcanic ash. Slope is 30 to 60 percent. Elevation is 2,000 to 4,200 feet. The average annual precipitation is 15 to 18 inches, the average annual air temperature is 47 to 49 degrees F, and the frost-free season at 32 degrees is 100 to 145 days.

Typical pedon of Taneum loam, 30 to 60 percent slopes, 1,300 feet south and 2,100 feet east of the northwest corner of sec. 11, T. 24 N., R. 19 E.

A1—0 to 4 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; few very fine tubular pores; 5 percent pebbles; neutral; gradual wavy boundary.

A2—4 to 16 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR

3/2) moist; moderate medium subangular blocky and granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; few very fine tubular pores; 5 percent pebbles and 5 percent cobbles; neutral; gradual wavy boundary.

ABt—16 to 21 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine tubular pores; few faint clay films in pores; 10 percent pebbles and 5 percent cobbles; neutral; gradual wavy boundary.

Bt1—21 to 34 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium prismatic structure; very hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine tubular pores; few faint clay films on faces of peds and in pores; 15 percent pebbles and 10 percent cobbles; neutral; gradual wavy boundary.

Bt2—34 to 47 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine and fine and common medium roots; common very fine tubular pores; common faint clay films on faces of peds; 20 percent pebbles and 10 percent cobbles; neutral; abrupt wavy boundary.

Bt3—47 to 58 inches; yellowish brown (10YR 5/4) extremely cobbly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and moderately plastic; few fine and medium roots; few very fine tubular pores; common faint clay films on faces of peds; 10 percent pebbles and 60 percent cobbles; neutral; abrupt irregular boundary.

R—58 to 62 inches; fractured unweathered schist.

The particle-size control section averages 27 to 35 percent clay and less than 35 percent rock fragments. Depth to unweathered bedrock is 40 to 60 inches.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 1 to 3 dry or moist.

The ABt horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is gravelly loam or gravelly clay loam.

The Bt1 and Bt2 horizons have value of 5 or 6 dry and 3 or 4 moist, and they have chroma of 3 to 6 dry or moist. They are gravelly clay loam, clay loam, or cobbly clay loam.

The Bt3 horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 to 6 dry or moist. It is very gravelly loam, cobbly loam, or extremely cobbly clay loam.

Thow Series

The Thow series consists of very deep, well drained soils on mountainsides. These soils formed in volcanic ash, pumice, and loess over ablation glacial till. Slope is 8 to 90 percent. Elevation is 1,200 to 3,400 feet. The average annual precipitation is 18 to 27 inches, the average annual air temperature is 43 to 45 degrees F, and the frost-free season at 32 degrees is 95 to 120 days.

Typical pedon of Thow cindery fine sandy loam, 30 to 60 percent slopes, 1,150 feet south and 800 feet west of the northeast corner of sec. 14, T. 27 N., R. 21 E.

Oi—1 inch to 0; undecomposed forest litter.

A—0 to 8 inches; light brownish gray (10YR 6/2) cindery fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak coarse granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many fine tubular pores; 1 percent pebbles and 15 percent pumice; slightly acid; clear smooth boundary.

Bw—8 to 22 inches; pale brown (10YR 6/3) cindery sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and medium roots; common fine tubular pores; 5 percent pebbles and 15 percent pumice; slightly acid; gradual wavy boundary.

BC—22 to 42 inches; light gray (10YR 7/2) cindery coarse sandy loam, dark grayish brown (10YR 4/2) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; common medium roots; many coarse tubular pores; 10 percent pebbles and 15 percent pumice; slightly acid; gradual wavy boundary.

2C—42 to 60 inches; light gray (10YR 7/2) extremely cobbly loamy sand, dark grayish brown (10YR 4/2) moist; single grain; soft, very friable, nonsticky and nonplastic; few fine and medium roots; common medium tubular pores; 40 percent pebbles, 25 percent cobbles, and 10 percent stones; neutral.

The particle-size control section is dominantly volcanic ash and is 5 to 35 percent pumice (2 to 10 millimeters in size). Depth to the sandy-skeletal 2C horizon is 40 to 60 inches. The profile is slightly acid or neutral.

The A horizon has value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 1 to 4 dry and 2 to 4 moist.

The Bw horizon has value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 1 to 4 dry and 2 to 4 moist. It is cindery sandy loam or cindery fine sandy loam.

The BC horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 2 to 4 dry or moist. It is cindery coarse sandy loam, cindery sandy loam, or cindery fine sandy loam.

The 2C horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 2 or 3 dry or moist. It is extremely cobbly loamy sand, very gravelly coarse sandy loam, or very gravelly loamy coarse sand.

Thowson Series

The Thowson series consists of very deep, well drained soils on mountainsides. These soils formed in volcanic ash and pumice over glacial till. Slope is 0 to 90 percent. Elevation is 1,100 to 3,600 feet. The average annual precipitation is 15 to 18 inches, the average annual air temperature is 47 to 50 degrees F, and the frost-free season at 32 degrees is 150 to 170 days.

Typical pedon of Thowson fine sandy loam, 8 to 15 percent slopes, 1,900 feet west and 900 feet north of the southeast corner of sec. 13, T. 27 N., R. 21 E.

A—0 to 4 inches; light brownish gray (10YR 6/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; few very fine tubular pores; 5 percent pumice (2 to 10 millimeters in size) and 5 percent pebbles; neutral; abrupt wavy boundary.

E—4 to 5 inches; white (10YR 8/1) very fine sandy loam, light gray (10YR 7/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; neutral; abrupt wavy boundary.

Bw1—5 to 14 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few coarse roots; few very fine tubular pores; 10 percent pumice (2 to 10 millimeters in size) and 5 percent pebbles; slightly acid; clear wavy boundary.

Bw2—14 to 34 inches; light yellowish brown (10YR 6/4) cindery fine sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine, fine, and coarse roots; few very fine tubular pores; 20 percent pumice (2 to 10 millimeters in size) and 5 percent pebbles; neutral; clear wavy boundary.

Bw3—34 to 45 inches; very pale brown (10YR 7/3) very cindery fine sandy loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine and medium roots; few fine tubular pores; 35 percent pumice (2 to 10 millimeters in size) and 5 percent pebbles; neutral; abrupt wavy boundary.

2C—45 to 60 inches; light gray (2.5Y 7/2) very cobbly loamy sand, grayish brown (2.5Y 5/2) moist; massive; soft, very friable, nonsticky and nonplastic; few fine and medium roots; few fine tubular pores; 20 percent pebbles, 20 percent cobbles, and 5 percent stones; slightly alkaline.

The particle-size control section is dominantly volcanic ash and is 15 to 35 percent pumice (2 to 10 millimeters in size). Depth to the sandy-skeletal and loamy-skeletal 2C horizon is 40 to 80 inches.

The A horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist. It is fine sandy loam or stony fine sandy loam. The horizon is slightly acid or neutral.

The Bw horizon has value of 6 or 7 dry and 4 to 6 moist, and it has chroma of 3 or 4 dry or moist. It is fine sandy loam, cindery fine sandy loam, very cindery fine sandy loam, or very cindery sandy loam. It is slightly acid or neutral.

The 2C horizon has hue of 10YR or 2.5Y, value of 6 or 7 dry and 4 or 5 moist, and chroma of 2 to 4 dry or moist. It is very cobbly loamy sand, very gravelly sandy loam, very stony fine sandy loam, or extremely gravelly loamy sand. It is 40 to 75 percent hard rock fragments. It is neutral or slightly alkaline.

Tillicum Series

The Tillicum series consists of deep, well drained soils on mountainsides. These soils formed in volcanic ash over residuum and colluvium derived from schist or gneiss. Slope is 8 to 90 percent. Elevation is 1,400 to 4,800 feet. The average annual precipitation is 35 to 55 inches, the average annual air temperature is 41 to 43 degrees F, and the frost-free season at 32 degrees is 70 to 110 days.

Typical pedon of Tillicum fine sandy loam, 30 to 60 percent slopes, 2,200 feet west and 1,200 feet south of the northeast corner of sec. 29, T. 25 N., R. 20 E.

Oe—2 inches to 0; decomposing forest litter.

A—0 to 8 inches; light brownish gray (10YR 6/2) fine sandy loam, brown (10YR 4/3) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; many fine tubular pores; trace of pumice; slightly acid; gradual wavy boundary.

Bw—8 to 16 inches; light brownish gray (10YR 6/2) fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine granular structure; soft, friable, nonsticky and nonplastic; common medium and coarse roots; many fine tubular pores; trace of pumice; slightly acid; gradual wavy boundary.

BC—16 to 24 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few fine and medium roots; common fine and medium tubular pores; 5 percent pebbles and trace of pumice; slightly acid; clear wavy boundary.

2C—24 to 42 inches; pale brown (10YR 6/3) cobbly sandy loam, dark grayish brown (10YR 4/2) moist; massive; hard, friable, slightly sticky and nonplastic; few fine and medium roots; common fine and medium tubular pores; 10 percent pebbles, 15 percent cobbles, 5 percent stones, and 30 percent soft rock fragments; stoneline at upper boundary of horizon; neutral; clear wavy boundary.

2R—42 to 46 inches; unweathered schist.

Depth to unweathered bedrock is 40 to 60 inches. The upper 5 to 20 inches of the particle-size control section is dominantly amorphous material and is 30 to 60 percent pyroclastic material, and the lower part is 15 to 35 percent rock fragments and 10 to 40 percent soft schist or gneiss fragments. Some pedons have a thin E horizon.

The A horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 1 to 3 dry or moist. It is fine sandy loam or sandy loam. It is strongly acid to slightly acid.

The Bw and BC horizons have hue of 10YR or 7.5YR, value of 5 to 7 dry and 3 to 5 moist, and chroma of 2 to 4 dry or moist. They are fine sandy loam, sandy loam, or gravelly sandy loam. They are moderately acid to neutral.

The 2C horizon has hue of 10YR or 2.5Y, value of 5 to 7 dry and 3 to 5 moist, and chroma of 2 to 4 dry or moist. It is cobbly sandy loam, stony sandy loam, or gravelly sandy loam. A cobble and stone line is at the boundary between the BC and 2C horizons in some pedons. The 2C horizon is slightly acid or neutral.

Tillmont Series

The Tillmont series consists of deep, well drained soils on mountainsides. These soils formed in volcanic ash and pumice over colluvium and residuum derived from schist or gneiss. Slope is 8 to 60 percent. Elevation is 2,500 to 4,600 feet. The average annual precipitation is 30 to 65 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 75 to 110 days.

Typical pedon of Tillmont cindery sandy loam, 30 to 60 percent slopes, at the center of sec. 17, T. 27 N., R. 18 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 6 inches; grayish brown (10YR 5/2) cindery sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; few fine tubular pores; 20 percent pumice and 5 percent pebbles; neutral; clear wavy boundary.

Bw—6 to 20 inches; light yellowish brown (10YR 6/4) cindery sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and medium and few coarse roots; common fine tubular pores; 30 percent pumice and 2 percent pebbles; neutral; clear wavy boundary.

2C1—20 to 34 inches; yellow (10YR 8/6) and white (10YR 8/2) cinders; single grain; loose; few medium and coarse roots; 95 percent pumice; neutral; abrupt wavy boundary.

3C2—34 to 38 inches; pale brown (10YR 6/3) cindery loamy coarse sand, dark yellowish brown (10YR 4/4) moist; single grain; loose, very friable, nonsticky and nonplastic; few fine, medium, and coarse roots; 15 percent cinders and 10 percent pebbles; slightly acid; abrupt wavy boundary.

4C3—38 to 46 inches; dark yellowish brown (10YR 4/4) extremely cobbly very fine sandy loam, dark brown (10YR 3/3) moist; massive; soft, very friable, nonsticky and nonplastic; few coarse roots; 20 percent pebbles, 50 percent cobbles, and 20 percent stones; slightly acid; abrupt irregular boundary.

4R—46 to 50 inches; fractured unweathered schist.

The particle-size control section is dominantly volcanic ash and pumice and is more than 35 percent pumice. Depth to unweathered bedrock is 40 to 60 inches. The profile is slightly acid or neutral. Some pedons have a thin E horizon.

The A horizon has value of 4 to 6 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist.

The Bw horizon has value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 2 to 4 dry or moist. It is cindery sandy loam or very cindery sandy loam.

The 2C1 horizon has value of 6 to 8 dry and 4 to 8 moist, and it has chroma of 2 to

4 moist and 4 to 6 dry. It is 65 to 95 percent pumice with unfilled voids.

The 3C2 horizon is cindery loamy coarse sand, very cindery loamy coarse sand, or cindery coarse sand.

The 4C3 horizon has value of 4 to 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is very cobbly sandy loam, extremely cobbly sandy loam, or extremely cobbly very fine sandy loam.

Tiptop Series

The Tiptop series consists of very deep, well drained soils on mountainsides. These soils formed in volcanic ash mixed with colluvium derived from sandstone. Slope is 30 to 60 percent. Elevation is 4,600 to 5,700 feet. The average annual precipitation is 25 to 45 inches, the average annual air temperature is 39 to 41 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Tiptop very gravelly loam, 30 to 60 percent slopes, 250 feet east and 750 feet north of the southwest corner of sec. 21, T. 22 N., R. 17 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A—0 to 2 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; many fine roots; few fine tubular pores; 30 percent pebbles, 5 percent cobbles, and 5 percent soft pebbles; slightly acid; abrupt smooth boundary.

Bw1—2 to 12 inches; yellowish brown (10YR 5/4) extremely gravelly loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; many fine and medium roots; common fine tubular pores; 45 percent pebbles, 10 percent cobbles, 5 percent stones, and 5 percent soft pebbles; slightly acid; gradual smooth boundary.

Bw2—12 to 28 inches; brown (10YR 5/3) extremely gravelly loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; many fine and medium roots; many fine and medium tubular pores; 50 percent pebbles, 10 percent cobbles, 5 percent stones, and 5 percent soft pebbles; slightly acid; clear wavy boundary.

C—28 to 60 inches; yellowish brown (10YR 5/6) extremely gravelly sandy loam, dark brown (10YR 4/3) moist; single grain; slightly hard, friable, nonsticky and nonplastic; few fine roots; 65 percent pebbles, 10 percent cobbles, 5 percent stones, and 5 percent soft pebbles; neutral.

The particle-size control section is dominantly amorphous material in the fine-earth fraction, and it averages 35 to 70 percent rock fragments.

The A horizon has value of 4 to 7 dry and 2 to 5 moist, and it has chroma of 2 or 3 dry or moist. It is moderately acid or slightly acid.

The Bw horizon has hue of 10YR or 7.5YR, value of 5 or 6 dry and 3 or 4 moist, and chroma of 3 or 4 dry or moist. It is extremely gravelly loam, extremely gravelly fine sandy loam, very gravelly loam, or very gravelly sandy loam. It is moderately acid to neutral.

The C horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 3 to 6 dry or moist. It is extremely gravelly fine sandy loam, extremely gravelly sandy loam, or extremely cobbly sandy loam. It is moderately acid to neutral.

Totem Series

The Totem series consists of very deep, well drained soils on mountainsides and in glaciated valleys. These soils formed in volcanic ash and pumice. Slope is 5 to 90 percent. Elevation is 2,600 to 5,500 feet. The average annual precipitation is 50 to 75 inches, the average annual air temperature is 40 to 43 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Totem sandy loam, 30 to 60 percent slopes, 1,500 feet east and 2,000 feet south of the northwest corner of sec. 10, T. 29 N., R. 16 E.

Oi—2 inches to 0.5 inch; loose forest litter, including needles, twigs, and bark.

Oe—0.5 inch to 0; partially decomposed forest litter.

E—0 to 1 inch; light brownish gray (10YR 6/2) sandy loam, grayish brown (10YR 5/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; common very fine and fine roots; few fine tubular pores; 5 percent pumice; strongly acid; gradual irregular boundary.

Bs—1 to 6 inches; brown (7.5YR 5/4) sandy loam, dark brown (7.5YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; weakly smeary; common very fine and fine and few medium roots; common fine tubular pores; 10 percent pumice; moderately acid; clear wavy boundary.

Bw—6 to 25 inches; light yellowish brown (10YR 6/4) sandy loam, dark yellowish brown (10YR 4/4) moist; strong brown (7.5YR 5/6) iron stains on 30 percent of ped faces; moderate coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; common very fine and few medium roots; common fine and medium tubular pores; 10 percent pumice; slightly acid; abrupt smooth boundary.

2C1—25 to 33 inches; light yellowish brown (10YR 6/4) very cindery sandy loam, dark yellowish brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic; weakly smeary; common very fine roots; 50 percent pumice; slightly acid; abrupt wavy boundary.

2C2—33 to 51 inches; very pale brown (10YR 7/4) and reddish yellow (7.5YR 6/6) cinders, dark brown (7.5YR 4/4) and strong brown (7.5YR 5/6) moist; single grain; loose; common very fine roots; many unfilled voids; 80 percent pumice (2 to 20 millimeters in size); slightly acid; abrupt wavy boundary.

2C3—51 to 60 inches; white (10YR 8/2) and yellow (10YR 7/6) cinders, light gray (10YR 7/2) and yellowish brown (10YR 5/6) moist; single grain; loose; many unfilled voids; 90 percent pumice (2 to 20 millimeters in size); slightly acid.

Depth to the pumiceous 2C horizon is 20 to 35 inches. The upper part of the particle-size control section is more than 60 percent volcanic ash, and the lower part averages 75 to 90 percent pumice. Thickness of the spodic horizon is 1 to 7 inches.

The E horizon has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 2 or 3 dry or moist. It is very strongly acid or strongly acid.

The Bs horizon has value of 3 or 4 moist and chroma of 4 to 6 dry or moist. It averages 0 to 10 percent pumice. It is strongly acid or moderately acid.

The Bw horizon has chroma of 3 or 4 moist. It averages 10 to 20 percent pumice and is sandy loam, cindery sandy loam, or cindery loam. It is slightly acid or neutral.

The 2C horizon has hue of 7.5YR or 10YR, value of 4 to 8 dry and 4 to 6 moist, and chroma of 2 to 8 dry or moist. It is very cindery sandy loam, extremely cindery sandy loam, or cinders and averages 75 to 95 percent pumice.

Treen Series

The Treen series consists of shallow, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from igneous and metamorphic rock mixed with volcanic ash. Slope is 45 to 90 percent. Elevation is 3,300 to 5,600 feet. The average annual precipitation is 70 to 100 inches, the average annual air temperature is 38 to 41 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Typical pedon of Treen fine sandy loam, 45 to 90 percent slopes, 800 feet east and 1,900 feet south of the northwest corner of sec. 12, T. 26 N., R. 14 E.

Oi—1 inch to 0; undecomposed forest litter.

A1—0 to 3 inches; dark grayish brown (10YR 4/2) fine sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; few very fine tubular pores; 5 percent pebbles; slightly acid; abrupt smooth boundary.

A2—3 to 11 inches; dark brown (10YR 4/3) fine sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine roots; few very fine tubular pores; 5 percent pebbles and 5 percent cobbles; moderately acid; clear wavy boundary.

Bw—11 to 16 inches; dark brown (7.5YR 4/4) gravelly fine sandy loam, dark brown (7.5YR 3/4) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; few very fine tubular pores; 15 percent pebbles and 5 percent cobbles; moderately acid; abrupt wavy boundary.

R—16 to 20 inches; fractured unweathered schist.

Depth to fractured unweathered bedrock is 10 to 20 inches. The profile is moderately acid or slightly acid.

The A horizon has hue of 10YR or 7.5YR, value of 4 or 5 dry and 2 or 3 moist, and chroma of 2 or 3 dry or moist.

The Bw horizon has hue of 7.5YR or 10YR and value of 4 or 5 dry and 3 to 5 moist. It is gravelly sandy loam, loam, or gravelly fine sandy loam.

Tronsen Series

The Tronsen series consists of very deep, well drained soils on mountainsides. These soils formed in residuum and colluvium derived from basalt or andesite mixed with loess and volcanic ash. Slope is 8 to 60 percent. Elevation is 3,500 to 4,000 feet. The average annual precipitation is 14 to 16 inches, the average annual air temperature is 46 to 48 degrees F, and the frost-free season at 32 degrees is about 140 to 165 days.

Typical pedon of Tronsen stony silt loam, 30 to 60 percent slopes, at the center of sec. 30, T. 24 N., R. 20 E.

A—0 to 9 inches; dark grayish brown (10YR 4/2) stony silt loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many fine roots; common fine and medium tubular pores; 15 percent pebbles, 5 percent cobbles, and 5 percent stones; 1 percent surface stones; neutral; clear smooth boundary.

BAt—9 to 16 inches; brown (10YR 4/3) very gravelly clay loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common fine and medium roots; common fine and medium tubular pores; common faint clay films on faces of peds; 30 percent pebbles and 10 percent cobbles; neutral; clear wavy boundary.

Bt1—16 to 30 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; very hard, very firm, moderately sticky and moderately plastic; common fine and medium roots; common fine tubular pores; common thin clay films on faces of peds; 30 percent pebbles and 10 percent cobbles; neutral; clear wavy boundary.

Bt2—30 to 60 inches; pale brown (10YR 6/3) extremely gravelly clay, brown (10YR 4/3) moist; massive; extremely hard, extremely firm, very sticky and very plastic;

few fine roots; common fine and medium tubular pores; few faint clay films on faces of peds; 50 percent pebbles and 15 percent cobbles; neutral.

The particle-size control section is 35 to 50 percent clay and 40 to 80 percent rock fragments.

The A horizon has hue of 10YR or 7.5YR, value of 4 or 5 dry and 2 or 3 moist, and chroma of 1 to 3 dry or moist.

The BAt and Bt1 horizons have hue of 10YR or 7.5YR, value of 4 to 6 dry and 3 to 5 moist, and chroma of 3 or 4 dry or moist. They are very gravelly clay loam, very cobbly clay loam, or very gravelly clay.

The Bt2 horizon has hue of 10YR or 7.5YR, value of 4 to 6 dry and 3 to 5 moist, and chroma of 3 or 4 dry or moist. It is extremely gravelly clay, extremely cobbly clay, very cobbly clay, or very cobbly clay loam. It is neutral or slightly alkaline.

Tyee Series

The Tyee series consists of shallow, well drained soils on south-facing mountain slopes. These soils formed in residuum and colluvium derived from granitic rock with minor amounts of loess and volcanic ash. Slope is 3 to 90 percent. Elevation is 1,200 to 3,600 feet. The average annual precipitation is 14 to 18 inches, the average annual air temperature is 46 to 49 degrees F, and the frost-free season at 32 degrees is 130 to 160 days.

Typical pedon of Tyee gravelly sandy loam, 30 to 90 percent slopes, 1,900 feet south and 900 feet east of the northwest corner of sec. 29, T. 27 N., R. 21 E.

A1—0 to 2 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine roots; few fine tubular pores; 15 percent pebbles; slightly alkaline; clear smooth boundary.

A2—2 to 11 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; common fine and few medium tubular pores; 15 percent pebbles; slightly alkaline; gradual wavy boundary.

C—11 to 19 inches; very pale brown (10YR 7/3) gravelly coarse sandy loam, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine and medium roots; common fine and few medium tubular pores; 20 percent pebbles; neutral; abrupt wavy boundary.

Cr—19 to 29 inches; weathered granodiorite.

Depth to weathered bedrock is 10 to 20 inches. The particle-size control section averages 10 to 35 percent rock fragments, mostly angular fine pebbles (2 to 20 millimeters in size), and 3 to 10 percent clay. The profile is slightly acid to slightly alkaline.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist.

The C horizon has value of 5 to 7 dry and 3 to 5 moist, and it has chroma of 3 or 4 dry or moist. It is sandy loam, gravelly coarse sandy loam, gravelly loam, or gravelly sandy loam. It averages 10 to 35 percent rock fragments.

Typic Cryaquands

Typic Cryaquands consists of very deep, poorly drained or somewhat poorly drained soils in wet depressional meadows on broad mountain ridges and saddles and in valleys and cirque basins. These soils formed in a variety of material, including volcanic ash and pumice, volcanic ash and pumice mixed with alluvium, and volcanic ash and pumice over glacial till. Slope is 0 to 15 percent. Elevation is 4,800 to 6,500 feet. The average annual precipitation is 40 to 60 inches, the average annual air temperature is 37 to 39 degrees F, and the frost-free season at 32 degrees is 60 to 90 days.

Reference pedon of Typic Cryaquands, nearly level to gently sloping, in Cow Creek Meadow, about 100 feet south and 100 feet east of the northwest corner of sec. 3, T. 29 N., R. 17 E.

A1—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; weakly smeary; many very fine and fine and few medium roots; common fine irregular pores; very strongly acid; clear smooth boundary.

A2—4 to 9 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; many fine and medium roots; common fine irregular pores; strongly acid; clear smooth boundary.

Bw—9 to 15 inches; very pale brown (10YR 7/4) very fine sandy loam, light olive brown (2.5Y 5/4) moist; common fine distinct mottles that are yellow (10YR 7/6) and yellowish brown (10YR 5/6) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; common very fine and fine and few medium roots; common fine irregular pores; moderately acid; clear smooth boundary.

Bg1—15 to 24 inches; light gray (5Y 7/1) fine sandy loam, gray (5Y 4/1) moist; many fine distinct mottles that are brownish yellow (10YR 6/6) and yellowish brown (10YR 5/6) moist; massive; soft, very friable, nonsticky and nonplastic; weakly smeary; few very fine roots; common fine irregular pores; moderately acid; gradual wavy boundary.

Bg2—24 to 60 inches; light gray (5Y 7/1) fine sandy loam, gray (5Y 4/1) moist; few fine distinct mottles that are brownish yellow (10YR 6/6) and yellowish brown (10YR 5/6) moist; massive; soft, very friable, nonsticky and nonplastic; common fine irregular pores; moderately acid.

Depth to gravelly or very gravelly glacial till is 24 to 60 inches or more. An apparent water table is present in March through August, and it is at its highest level (0.8 to 1.2 feet) in May and June.

The A horizon has value of 4 to 6 dry and 2 to 4 moist, and it has chroma of 1 to 3 dry or moist. It is silt loam, loam, fine sandy loam, or cindery fine sandy loam and is 0 to 20 percent pumice and 0 to 15 percent rock fragments. It is very strongly acid to moderately acid.

The Bw horizon has value 5 to 7 dry and 4 or 5 moist, and it has chroma of 2 to 4 dry or moist. It has few to common mottles that have hue of 7.5YR or 10YR, value of 5 to 7 dry and 5 or 6 moist, and chroma of 5 or 6 dry or moist. It is fine sandy loam, cinders, or gravelly sandy loam. It is strongly acid or moderately acid.

The Bg horizon has hue of 5Y or 2.5Y and value of 6 or 7 dry and 4 or 5 moist. It has few or many mottles that have hue of 5YR, 7.5YR, or 10YR, value of 5 or 6 dry and 4 or 5 moist, and chroma of 4 to 6 dry or moist. It is very fine sandy loam, fine sandy loam, cinders, gravelly sandy loam, or very gravelly sandy loam and is 10 to 90 percent pumice and 0 to 45 percent rock fragments. It is strongly acid or moderately acid.

Vabbing Series

The Vabbing series consists of very deep, well drained soils on mountainsides. These soils formed in volcanic ash and pumice over glacial till. Slope is 3 to 90 percent. Elevation is 2,000 to 4,400 feet. The average annual precipitation is 70 to 100 inches, the average annual air temperature is 40 to 43 degrees F, and the frost-free season at 32 degrees is 70 to 100 days.

Typical pedon of Vabbing bouldery sandy loam, 30 to 60 percent slopes, 1,000 feet east and 700 feet south of the northwest corner of sec. 7, T. 27 N., R. 17 E.

Oi and Oe—4 inches to 0; undecomposed and decomposed forest litter.

E—0 to 3 inches; light brownish gray (10YR 6/2) bouldery sandy loam, dark grayish brown (10YR 4/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; few very fine tubular pores; 15 percent pumice; 3 percent surface boulders; slightly acid; clear smooth boundary.

Bs1—3 to 10 inches; light brown (7.5YR 6/4) cindery sandy loam, dark brown (7.5YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; few fine tubular pores; 25 percent pumice; slightly acid; clear wavy boundary.

BC1—10 to 22 inches; white and reddish yellow cinders, light gray (10YR 7/1) and dark brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic; few fine and medium roots; 90 percent pumice; neutral; abrupt smooth boundary.

BC2—22 to 26 inches; light gray (10YR 7/1) and reddish yellow (7.5YR 6/6) very cindery coarse sand, light gray (10YR 7/1) and strong brown (7.5YR 5/8) moist; single grain; loose, nonsticky and nonplastic; 55 percent pumice; slightly acid; abrupt smooth boundary.

2C1—26 to 36 inches; very pale brown (10YR 7/4) very gravelly sandy loam, light olive brown (2.5Y 5/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; 20 percent pebbles and 20 percent cobbles; slightly acid; gradual wavy boundary.

2C2—36 to 60 inches; very pale brown (10YR 7/4) very gravelly sandy loam, dark brown (2.5Y 5/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; 30 percent pebbles and 5 percent cobbles; slightly acid.

The solum averages 35 to 80 percent pumice.

The E horizon has value of 4 to 6 moist and chroma of 1 to 3 dry or moist. It is moderately acid to slightly acid.

The Bs horizon has hue of 7.5YR, 5YR, or 10YR, value of 4 or 5 moist, and chroma of 3 or 4 dry and 3 to 8 moist. It is cindery or very cindery sandy loam or loamy sand.

The BC horizon has hue of 7.5YR or 10YR, value of 6 to 8 dry and 4 to 8 moist, and chroma of 3 or 4 moist. It is very cindery or extremely cindery sandy loam, cinders, or very cindery coarse sand. It is slightly acid or neutral.

The 2C horizon has hue of 10YR or 2.5Y and chroma of 2 to 4 dry or moist. It is extremely stony sandy loam, very gravelly sandy loam, or very stony sandy loam. It is 35 to 80 percent rock fragments. It is slightly acid or neutral.

Vabus Series

The Vabus series consists of soils that are moderately deep to dense glacial till and are moderately well drained. These soils are on mountainsides and in valleys. They formed in glacial till with an admixture of volcanic ash. Slope is 3 to 60 percent. Elevation is 2,500 to 4,800 feet. The average annual precipitation is 70 to 90 inches, the average annual air temperature is 39 to 42 degrees F, and the frost-free season at 32 degrees is 70 to 100 days.

Typical pedon of Vabus gravelly fine sandy loam, 3 to 30 percent slopes, near the southwest corner of sec. 12, T. 24 N., R. 15 E.

Oi—1 inch to 0; undecomposed forest litter.

E—0 to 0.5 inch; gray (10YR 6/1) sandy loam, dark gray (10YR 4/1) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; few fine roots; few very fine tubular pores; 5 percent pebbles; strongly acid; abrupt wavy boundary.

Bs1—0.5 inch to 6 inches; brown (7.5YR 5/4) gravelly fine sandy loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; few fine roots; few fine tubular pores; 15 percent pebbles; moderately acid; gradual wavy boundary.

Bs2—6 to 18 inches; light yellowish brown (10YR 6/4) very gravelly sandy loam, dark brown (7.5YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; many fine, medium, and coarse roots; few very fine and fine tubular pores; 30 percent pebbles and 5 percent cobbles; moderately acid; gradual wavy boundary.

BC—18 to 36 inches; yellowish brown (10YR 5/4) very gravelly sandy loam, dark brown (7.5YR 4/4) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; many fine, medium, and coarse roots; common very fine and fine tubular pores; 30 percent pebbles and 5 percent cobbles; moderately acid; clear wavy boundary.

Cd—36 to 60 inches; light olive brown (2.5Y 5/4) dense glacial till that breaks to extremely stony coarse sandy loam, dark grayish brown (2.5Y 4/2) moist; massive; hard, very firm, nonsticky and nonplastic; common medium tubular pores; 20 percent pebbles, 15 percent cobbles, and 45 percent stones; moderately acid.

Depth to dense glacial till is 20 to 40 inches. The particle-size control section is 35 to 75 percent rock fragments. The profile is very strongly acid to moderately acid. A perched water table is present in February through April, and it is at a depth of 1.5 to 2.0 feet.

The E horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 1 or 2 dry or moist.

The Bs1 horizon has hue of 5YR, 10YR, or 7.5YR, value of 4 or 5 dry and 3 or 4 moist, and chroma of 4 to 6 dry or moist. It is gravelly fine sandy loam or sandy loam.

The Bs2 horizon has hue of 7.5YR or 10YR, value of 4 or 5 moist, and chroma of 4 to 6 dry or moist. It is very gravelly sandy loam or very gravelly loam.

The BC horizon has hue of 10YR or 7.5YR, value of 5 or 6 dry and 4 or 5 moist, and chroma of 4 to 6 dry or moist. It is very gravelly sandy loam, extremely gravelly sandy loam, extremely cobbly sandy loam, or extremely stony coarse sandy loam.

The Cd horizon has hue of 5Y or 2.5YR, value of 5 to 7 dry and 4 or 5 moist, and chroma of 2 to 4 dry or moist.

Varelum Series

The Varelum series consists of deep, well drained soils on foothills and terraces. These soils formed in residuum, colluvium, and slope alluvium derived from sandstone mixed with loess and volcanic ash. Slope is 3 to 60 percent. Elevation is 1,300 to 3,000 feet. The average annual precipitation is 18 to 28 inches, the average annual air temperature is 45 to 47 degrees F, and the frost-free season at 32 degrees is 150 to 185 days.

Typical pedon of Varelum loam, 8 to 15 percent slopes, 700 feet south and 400 feet west of the northeast corner of sec. 6, T. 23 N., R. 18 E.

Ap—0 to 6 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common fine tubular pores; neutral; gradual smooth boundary.

AB—6 to 18 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common medium tubular pores; neutral; clear wavy boundary.

Bt—18 to 24 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, very firm, moderately sticky and moderately plastic; common fine roots; many fine tubular pores; few faint clay films on faces of peds; neutral; gradual wavy boundary.

BCt—24 to 42 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, very firm, moderately sticky and moderately plastic; common fine roots; many fine tubular pores; few faint clay films on faces of peds; neutral; abrupt wavy boundary.

Cr—42 to 52 inches; weathered sandstone.

Thickness of the solum and depth to weathered bedrock are 40 to 60 inches. The profile is 0 to 5 percent rock fragments.

The A horizon has value of 3 or 4 moist. It is neutral or slightly alkaline.

The AB horizon has value of 5 or 6 dry and chroma of 2 or 3 dry or moist. It is loam. It is slightly acid or neutral.

The Bt horizon has value of 4 to 6 dry and chroma of 3 or 4 dry or moist. It is loam, clay loam, or sandy clay loam. It is slightly acid or neutral.

Vitricryands

Vitricryands consists of moderately deep and deep, well drained soils on mountainsides and ridgetops. These soils formed in volcanic ash over residuum and colluvium derived from granodiorite or schist. Slope is 30 to 110 percent. Elevation is 5,000 to 6,500 feet. The average annual precipitation is 35 to 55 inches, the average annual air temperature is 37 to 39 degrees F, and the frost-free season at 32 degrees is 45 to 85 days.

Reference pedon of Vitricryands, steep and very steep, 1,000 feet south and 2,500 feet west of the northeast corner of sec. 21, T. 24 N., R. 17 E.

Oi—1 inch to 0; undecomposed forest litter and partially decomposed organic material; moderately acid.

E—0 to 0.5 inch; light gray (10YR 7/1) loamy sand, gray (10YR 5/1) moist; single grain; loose, nonsticky and nonplastic; moderately acid; clear smooth boundary.

Bw1—0.5 inch to 12 inches; yellowish brown (10YR 5/4) sandy loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and medium and few coarse roots; many very fine tubular pores; 10 percent pebbles; slightly acid; clear wavy boundary.

Bw2—12 to 26 inches; light yellowish brown (10YR 6/4) gravelly coarse sandy loam, brown (7.5YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine and medium roots; common very fine tubular pores; 15 percent pebbles; slightly acid; gradual wavy boundary.

2Cr—26 to 36 inches; weathered granodiorite.

The particle-size control section is dominantly volcanic ash in the fine-earth fraction, and it is 10 to 65 percent rock fragments. Depth to weathered bedrock is 20 to 60 inches. Some pedons have a thin A horizon.

The E horizon has value of 6 or 7 dry and 4 or 5 moist, and it has chroma of 1 or 2 dry or moist. It is loamy sand, sandy loam, or fine sandy loam. It is slightly acid to strongly acid.

The Bw horizon has hue of 10YR or 7.5YR, value of 4 to 6 dry and 3 or 4 moist, and chroma of 3 or 4 dry or moist. It is sandy loam, very gravelly sandy loam, gravelly coarse sandy loam, or stony sandy loam. It is slightly acid to strongly acid.

The C horizon, where present, has hue of 10YR or 2.5Y, value of 5 or 6 dry, and chroma of 2 to 4 dry or moist. It is very stony fine sandy loam, extremely cobbly loamy coarse sand, or very cobbly loamy sand. It is slightly acid to strongly acid.

Wagberg Series

The Wagberg series consists of very deep, well drained soils on backslopes and toeslopes of hills and moraines. These soils formed in glacial till with minor amounts of volcanic ash and loess in the upper part. Slope is 5 to 90 percent. Elevation is 1,200 to 3,500 feet. The average annual precipitation is 12 to 15 inches, the average annual air temperature is 47 to 52 degrees F, and the frost-free season at 32 degrees is 120 to 150 days.

Typical pedon of Wagberg stony fine sandy loam in an area of Wagberg complex, 25 to 70 percent slopes, 1,518 feet north and 264 feet east of the southwest corner of sec. 29, T. 29 N., R. 23 E.

A1—0 to 5 inches; dark grayish brown (10YR 4/2) stony fine sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium roots; common medium irregular pores; 15 percent pebbles, 10 percent cobbles, and 5 percent stones; 1 percent surface stones; neutral; clear wavy boundary.

A2—5 to 13 inches; grayish brown (2.5Y 5/2) cobbly sandy loam, very dark grayish brown (2.5Y 3/2) moist; moderate fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine, fine, and medium roots; common medium irregular and tubular pores; 20 percent pebbles and 10 percent cobbles; neutral; abrupt wavy boundary.

2BA—13 to 24 inches; light brownish gray (2.5Y 6/2) very cobbly sandy loam, olive brown (2.5Y 4/4) moist; moderate fine subangular blocky structure; hard, firm, nonsticky and nonplastic; common very fine and few medium roots; common medium irregular and tubular pores; 25 percent pebbles, 20 percent cobbles, and 2 percent stones; neutral; gradual wavy boundary.

2Bw1—24 to 38 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine and fine roots; common medium irregular and tubular pores; 30 percent pebbles, 10 percent cobbles, and 2 percent stones; neutral; clear wavy boundary.

2Bw2—38 to 53 inches; light yellowish brown (2.5Y 6/4) very cobbly coarse sandy loam, olive brown (2.5Y 4/4) moist; weak fine subangular blocky structure; hard, firm, nonsticky and slightly plastic; few very fine and fine roots; common medium irregular and tubular pores; 20 percent pebbles, 25 percent cobbles, and 5 percent stones; neutral; gradual wavy boundary.

2C—53 to 60 inches; yellowish brown (10YR 5/4) very cobbly loamy sand, dark grayish brown (2.5Y 4/2) moist; massive; hard, firm, nonsticky and nonplastic; few very fine roots; common irregular tubular pores; 25 percent pebbles, 20 percent cobbles, and 5 percent stones; neutral.

The particle-size control section averages 35 to 60 percent rock fragments.

The A horizon has hue of 10YR or 2.5Y, value of 4 or 5 dry and 2 or 3 moist, and chroma of 1 or 2 dry or moist. The A1 horizon is stony fine sandy loam or very stony fine sandy loam, and the A2 horizon is cobbly sandy loam or gravelly sandy loam.

The 2BA horizon has value of 5 or 6 dry and chroma of 3 or 4 moist. It is very cobbly sandy loam or very gravelly sandy loam.

The 2Bw horizon has hue of 10YR or 2.5Y, value of 5 or 6 dry and 3 or 4 moist, and chroma of 2 or 4 dry or moist. It is very gravelly sandy loam, very gravelly coarse sandy loam, very cobbly sandy loam, or very cobbly coarse sandy loam.

The 2C horizon has hue of 10YR or 2.5Y, value of 5 to 7 dry and 4 or 5 moist, and chroma of 2 to 4 dry or moist. It is very gravelly sandy loam, very gravelly coarse sandy loam, very cobbly sandy loam, very cobbly loamy sand, very cobbly loamy fine sand, or very cobbly coarse sandy loam.

Wedge Series

The Wedge series consists of very deep, well drained soils on mountains. These soils formed in volcanic ash and pumice. Slope is 0 to 60 percent. Elevation is 2,500 to 5,500 feet. The average annual precipitation is 35 to 55 inches, the average annual air temperature is 37 to 40 degrees F, and the frost-free season at 32 degrees is 55 to 100 days.

Typical pedon of Wedge cindery sandy loam, 30 to 60 percent slopes, 1,000 feet north and 1,000 feet west of the southeast corner of sec. 28, T. 29 N., R. 17 E.

Oe—1 inch to 0; partially decomposed needles, twigs, and bark.

E—0 to 2 inches; light gray (10YR 7/1 and 5/2) fine sandy loam, grayish brown (10YR 5/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, medium, and coarse roots; common very fine irregular pores; 5 percent pumice; slightly acid; abrupt wavy boundary.

Bs1—2 to 5 inches; brownish yellow and pale brown (10YR 6/6 and 6/3) cindery sandy loam, dark yellowish brown and brown (10YR 4/6 and 10YR 5/3) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; many very fine and fine and few medium roots; common very fine irregular pores; 20 percent pumice; neutral; clear wavy boundary.

Bs2—5 to 11 inches; brownish yellow and pale brown (10YR 6/6 and 10YR 6/3) cindery sandy loam, dark yellowish brown and yellowish brown (10YR 4/6 and 10YR 5/4) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; many very fine and fine roots; common very fine irregular pores; 20 percent pumice; neutral; clear wavy boundary.

Bs3—11 to 16 inches; very pale brown (10YR 7/4) very cindery sandy loam, dark yellowish brown (10YR 4/6) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; weakly smeary; many fine to coarse roots; many fine irregular pores; 50 percent pumice; neutral; clear wavy boundary.

BC1—16 to 25 inches; light yellowish brown (10YR 6/4) very cindery sandy loam, dark yellowish brown (10YR 4/6) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; weakly smeary; common very fine and few coarse roots; common fine irregular pores; 50 percent pumice; neutral; abrupt wavy boundary.

BC2—25 to 31 inches; very pale brown (10YR 6/4) extremely cindery loamy sand, dark yellowish brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic; many fine and medium roots; many fine irregular pores; 70 percent pumice; neutral; abrupt smooth boundary.

2C1—31 to 50 inches, yellow and white (10YR 8/6 and 10YR 8/1) cinders, brownish yellow and very pale brown (10YR 6/8 and 10YR 7/3) moist; single grain; loose, nonsticky and nonplastic; common fine and few medium roots; many coarse irregular pores; 90 percent pumice and 5 percent pyroclastic pebbles, voids unfilled; neutral; clear smooth boundary.

2C2—50 to 60 inches; white and yellow (10YR 8/1 and 10YR 8/6) cinders, very pale brown and brownish yellow (10YR 7/3 and 10YR 6/6) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; many coarse irregular pores; 90 percent pumice and 5 percent pyroclastic pebbles, voids unfilled; neutral.

The particle-size control section averages 45 to 90 percent pumice. Depth to the pumiceous 2C horizon is 15 to 35 inches.

The E horizon has hue of 7.5YR or 10YR or is neutral. It has value of 6 or 7 dry and 3 to 6 moist, and it has chroma of 0 to 3 dry or moist. It is slightly acid to very strongly acid.

The Bs1 horizon has hue of 7.5YR or 10YR, value of 5 to 7 dry and 4 or 5 moist, and chroma of 3 to 6 dry or moist. It is cindery sandy loam or cindery fine sandy loam. It is moderately acid or slightly acid.

The Bs2 horizon has hue of 7.5YR or 10YR, value of 6 or 7 dry and 4 to 6 moist, and chroma of 3 to 6 dry or moist. It is cindery sandy loam, very cindery fine sandy loam, cindery fine sandy loam, or very cindery loamy sand. It is moderately acid to neutral.

The Bs3 horizon has hue of 7.5YR or 10YR, value of 6 or 7 dry and 4 or 5 moist, and chroma of 3 to 6 dry or moist. It is very cindery sandy loam, extremely cindery sandy loam, or extremely cindery loamy sand. It is moderately acid to neutral.

The BC horizon has hue of 7.5YR or 10YR, value of 6 or 7 dry and 4 or 5 moist, and chroma of 3 or 4 dry or moist. It is very cindery sandy loam, extremely cindery loamy sand, extremely cindery sandy loam, or extremely cindery coarse sand. It is moderately acid to neutral.

The 2C horizon has hue of 7.5YR or 10YR, value of 6 to 8 dry and 5 to 8 moist, and chroma of 2 to 8 dry or moist. It is cinders. It is moderately acid to neutral.

Wedgemont Series

The Wedgemont series consists of very deep, well drained soils on mountainsides. These soils formed in volcanic ash and pumice over colluvium derived from gneiss and schist. Slope is 30 to 60 percent. Elevation is 4,000 to 5,500 feet. The average annual precipitation is 30 to 40 inches, the average annual air temperature is 39 to 42 degrees F, and the frost-free season at 32 degrees is 65 to 95 days.

Typical pedon of Wedgemont very cindery fine sandy loam, 30 to 60 percent slopes, 2,640 feet south and 1,000 feet east of the northwest corner of sec. 27, T. 27 N., R. 18 E.

Oi—1 inch to 0; needles, twigs and leaves; abrupt smooth boundary.

E—0 to 1 inch; light gray (10YR 7/1) very cindery fine sandy loam, light gray (10YR 7/2) moist; weak medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; many fine and medium irregular pores; 5 percent pumice; neutral; abrupt wavy boundary.

Bs1—1 to 19 inches; very pale brown (10YR 7/3) very cindery fine sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; many fine and medium irregular pores; 40 percent pumice; slightly acid; gradual wavy boundary.

Bs2—19 to 28 inches; very pale brown (10YR 7/4) extremely cindery sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine and medium roots; many fine and medium irregular pores; 5 percent pebbles and 65 percent pumice; slightly acid; clear wavy boundary.

2C—28 to 60 inches; light brownish gray (10YR 6/2) very gravelly fine sandy loam, dark brown (10YR 4/3) moist; massive; firm, friable, nonsticky and nonplastic; few fine roots; few fine irregular pores; 40 percent pebbles and 10 percent cobbles; slightly acid.

The upper part of the particle-size control section averages 35 to 70 percent pumice and 0 to 5 percent pebbles, and the lower part averages 40 to 65 percent rock fragments.

The E horizon has value of 6 or 7 dry and 4 to 7 moist, and it has chroma of 1 or 2 dry or moist. It is neutral or slightly acid.

The Bs1 horizon has hue of 7.5YR or 10YR, value of 6 or 7 dry and 5 or 6 moist, and chroma of 3 or 4 dry or moist. It is very cindery fine sandy loam, extremely cindery fine sandy loam, very cindery sandy loam, or extremely cindery sandy loam.

The Bs2 horizon has hue of 7.5YR or 10YR, value of 6 or 7 dry and 5 or 6 moist, and chroma of 4 to 6 dry or moist. It is very cindery fine sandy loam, extremely cindery fine sandy loam, very cindery sandy loam, or extremely cindery sandy loam.

The 2C horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 2 or 3 dry or moist. It is very gravelly fine sandy loam, very gravelly sandy loam, extremely gravelly fine sandy loam, or extremely gravelly sandy loam. It averages 35 to 60 percent pebbles, 5 to 15 percent cobbles, and 0 to 5 percent stones.

Wilma Series

The Wilma series consists of moderately deep, well drained soils on ridge crests and spur ridges of mountainsides. These soils formed in colluvium and residuum derived from granitic rock with a mantle of volcanic ash. Slope is 30 to 60 percent. Elevation is 2,500 to 5,800 feet. The average annual precipitation is 22 to 35 inches, the average annual air temperature is 43 to 46 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Wilma stony fine sandy loam, 30 to 60 percent slopes, 2,000 feet west and 1,000 feet south of the northeast corner of sec. 33, T. 29 N., R. 20 E.

A—0 to 4 inches; grayish brown (10YR 5/2) stony fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak moderate granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; common medium tubular pores; 15 percent pebbles, 5 percent soft pebbles, and 5 percent cobbles; 2 percent surface stones; neutral; abrupt wavy boundary.

Bw—4 to 12 inches; brown (7.5YR 5/4) gravelly sandy loam, dark brown (7.5YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many fine and medium roots; many fine and medium tubular pores; 20 percent pebbles, 5 percent soft pebbles, and 5 percent cobbles; neutral; abrupt wavy boundary.

2BC—12 to 24 inches; light yellowish brown (10YR 6/4) very gravelly fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many fine roots; common fine and medium tubular pores; 50 percent pebbles, 15 percent soft pebbles, and 5 percent cobbles; neutral; abrupt wavy boundary.

2C—24 to 37 inches; brownish yellow (10YR 6/6) very gravelly loamy sand, dark yellowish brown (10YR 4/6) moist; massive; slightly hard, friable, nonsticky and nonplastic; common fine roots; few fine tubular pores; 35 percent pebbles and 50 percent soft pebbles; neutral; abrupt wavy boundary.

2R—37 to 41 inches; unweathered granite.

Depth to unweathered bedrock is 20 to 40 inches. The particle-size control section averages 35 to 60 percent rock fragments. The profile is slightly acid or neutral. Some pedons have an O horizon of undecomposed organic matter.

The A horizon has value of 4 or 5 dry and 3 or 4 moist, and it has chroma of 2 or 3 dry or moist. It is 15 to 25 percent hard rock fragments and has 1 to 3 percent surface stones.

The Bw horizon has hue of 7.5YR or 10YR, value of 5 or 6 dry and 4 or 5 moist, and chroma of 3 or 4 dry or moist. It is gravelly sandy loam, gravelly fine sandy loam, or very gravelly sandy loam. It is 20 to 40 percent hard rock fragments.

The 2BC horizon has hue of 10YR or 2.5Y, value of 5 or 6 dry and 4 or 5 moist, and chroma of 4 to 6 dry or moist. It is very gravelly fine sandy loam or very gravelly sandy loam. It is 35 to 60 percent hard rock fragments. Some pedons do not have a 2BC horizon.

The 2C horizon has hue of 10YR or 2.5Y, value of 6 or 7 dry and 4 or 5 moist, and chroma of 4 to 6 dry or moist. It is very gravelly loamy sand or very gravelly sandy loam. It is 35 to 60 percent hard rock fragments. It is massive or single grain.

Yaxing Series

The Yaxing series consists of very deep, well drained soils on foothills. These soils formed in residuum and colluvium derived from sandstone mixed with loess in the upper part. Slope is 8 to 60 percent. Elevation is 1,000 to 3,200 feet. The average annual precipitation is 16 to 18 inches, the average annual air temperature is 46 to 48 degrees F, and the frost-free season at 32 degrees is 110 to 150 days.

Typical pedon of Yaxing loam, 30 to 60 percent slopes, about 4 miles west of Wenatchee, Washington; 1,100 feet north and 1,640 feet west of the southeast corner of sec. 14, T. 22 N., R. 19 E.

A1—0 to 9 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium granular structure; soft, friable, nonsticky and nonplastic; many very fine, fine, and medium roots; few fine and medium interstitial pores; neutral; gradual wavy boundary.

A2—9 to 21 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate medium granular structure; slightly hard, friable, nonsticky and nonplastic; common very fine, fine, and medium roots; few fine interstitial pores; slightly alkaline; clear wavy boundary.

Bt—21 to 36 inches; pale brown (10YR 6/3) loam, yellowish brown (10YR 5/4) moist; weak medium and coarse subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common fine roots; few fine interstitial pores; few faint clay films on faces of peds; slightly alkaline; gradual wavy boundary.

C—36 to 60 inches; pale brown (10YR 6/3) loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, firm, slightly sticky and slightly plastic; few fine roots; few medium and coarse tubular pores; slightly alkaline.

The particle-size control section averages 20 to 30 percent clay.

The A horizon has value of 4 or 5 dry and 2 or 3 moist. It is neutral or slightly alkaline.

The Bt horizon has value of 5 or 6 dry and 3 to 5 moist, and it has chroma of 3 or 4 dry and 4 or 5 moist. It is loam or clay loam.

The C horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry and 2 to 4 moist. It is loam.

Yaxon Series

The Yaxon series consists of very deep, well drained soils on backslopes and footslopes of foothills and mountains. These soils formed in residuum derived from sandstone and schist mixed with loess in the upper part. Slope is 8 to 65 percent. Elevation is 1,200 to 4,200 feet. The average annual precipitation is 12 to 16 inches, the average annual air temperature is 46 to 50 degrees F, and the frost-free season at 32 degrees is 120 to 175 days.

Typical pedon of Yaxon silt loam, 8 to 15 percent slopes, 1,800 feet south and 2,100 feet east of the northwest corner of sec. 32, T. 24 N., R. 20 E.

A—0 to 14 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak medium granular structure; slightly hard, nonsticky and nonplastic; many fine roots; few very fine tubular pores; slightly alkaline; abrupt smooth boundary.

Bt1—14 to 22 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, very firm, sticky and plastic; common fine roots; common fine and very fine tubular pores; few faint clay films on faces of peds; neutral; gradual wavy boundary.

Bt2—22 to 40 inches; yellowish brown (10YR 5/4) clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, very firm, sticky and plastic; common fine roots; common fine and very fine tubular pores; few faint clay films on faces of peds; slightly alkaline; gradual wavy boundary.

C—40 to 60 inches; pale brown (10YR 6/3) clay loam, yellowish brown (10YR 5/4) moist; massive; hard, very firm, slightly sticky and slightly plastic; few fine roots; many fine and very fine tubular pores; neutral.

The particle-size control section is 0 to 5 percent rock fragments.

The A horizon has value of 4 or 5 dry and 2 or 3 moist, and it has chroma of 2 or 3 dry or moist. It is neutral or slightly alkaline.

The Bt horizon has value of 5 or 6 dry and 3 or 4 moist, and it has chroma of 3 or 4 dry or moist. It is clay loam, loam, or sandy clay loam. It is neutral or slightly alkaline.

The C horizon has value of 5 or 6 dry and 4 or 5 moist, and it has chroma of 3 or 4 dry or moist. It is clay loam, sandy clay loam, or loam and may have pockets of weathered sandstone.

Zeb Series

The Zeb series consists of very deep, well drained soils on alluvial fans and terraces. These soils formed in alluvium. Slope is 3 to 30 percent. Elevation is 1,600 to 2,500 feet. The average annual precipitation is 24 to 40 inches, the average annual air temperature is 42 to 44 degrees F, and the frost-free season at 32 degrees is 90 to 120 days.

Typical pedon of Zeb stony sandy loam, 3 to 30 percent slopes, 850 feet east and 2,200 feet north of the southwest corner of sec. 11, T. 27 N., R. 19 E.

Oi—0.5 inch to 0; undecomposed forest litter.

A1—0 to 2 inches; gray (10YR 5/1) stony sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine roots; few very fine tubular pores; 10 percent pebbles, 5 percent cobbles, and 5 percent stones; 2 percent surface stones and boulders; neutral; clear smooth boundary.

A2—2 to 11 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine and few medium roots; few very fine tubular pores; 15 percent pebbles and 5 percent cobbles; neutral; clear smooth boundary.

Bw—11 to 28 inches; pale brown (10YR 6/3) very cobbly sandy loam, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and medium roots; few very fine tubular pores; 20 percent pebbles and 15 percent cobbles; neutral; gradual smooth boundary.

C—28 to 60 inches; pale brown (10YR 6/3) very cobbly coarse sandy loam, dark brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and coarse roots; few very fine tubular pores; 20 percent pebbles, 15 percent cobbles, and 5 percent stones; slightly acid.

The particle-size control section averages 5 to 12 percent clay and 35 to 65 percent rock fragments. The profile is slightly acid or neutral.

The A horizon has value of 2 or 3 moist and chroma of 2 or 3 dry or moist. The A2 horizon is gravelly sandy loam, gravelly fine sandy loam, or very gravelly sandy loam.

The Bw horizon has value of 3 or 4 moist and chroma of 1 to 3 dry or moist. It is very cobbly sandy loam or very gravelly sandy loam.

The C horizon has value of 5 to 7 dry and 3 or 4 moist, and it has chroma of 1 to 3 dry or moist. It is very cobbly coarse sandy loam, very stony sandy loam, or extremely cobbly sandy loam.

Formation of the Soils

Soils are a collection of three-dimensional natural bodies on the landscape that contain living matter and support or are capable of supporting plants. The characteristics and properties of soils are determined by the physical and chemical processes resulting from the interaction of the five soil-forming factors—parent material, climate, living organisms, topography, and time. While the influence of each soil-forming factor may vary from place to place, the combined interaction of all of the soil-forming factors results in the development of unique soils on the landscape.

The soil-forming factors, their influence on soil development, and representative soils in the survey area are discussed in this section. While each of the soil-forming factors are discussed separately, it is the combined interaction of all of these factors that affects soil formation.

Parent Material

Parent material is the unconsolidated mineral or organic matter from which soils develop. The soils in the survey area formed in a wide variety of parent material, including residuum and colluvium derived from igneous, metamorphic, and sedimentary rock; glacial deposits of till, outwash, and glaciolacustrine sediment; volcanic ash and pumice; loess; and alluvium. Many of the soils in the area formed in more than one kind of parent material. The Bigcreek series, for example, formed in volcanic ash and pumice over glacial outwash. The kinds of parent material in the survey area are discussed in the following paragraphs.

Residuum and Colluvium Derived From Bedrock

There are six main groups of bedrock in the survey area—gneiss, schist, serpentine, sandstone, granite, and basalt. Soils that are derived from bedrock are greatly influenced by the characteristics of the bedrock. Among the oldest rock in the survey area is the metamorphic rock of the Roaring Creek Terrane, Chelan Mountains Terrane, Mason-Inglass Terrane, and Ingalls Tectonic complex (Tabor and others, 1980 and 1982).

The gneiss in the survey area is massive and relatively resistant to weathering. The soils that formed in gneiss have a high percentage of angular rock fragments in the profile and have a lithic contact. Schist has a somewhat platy structure and is less resistant to weathering. The soils that formed in schist may have channery rock fragments in the profile, and a larger percentage of the fragments are weathered and soft and can be broken easily. Soils of the Ardenvoir and Swakane series are among those that formed in gneiss and schist. Soils of the Ardenmont and Ardening series are among those that formed in schist.

Serpentinitic rock is mainly in an area near the junction of Peshastin Creek and Ingalls Creek and west of Peshastin Creek and south of Ingalls Creek. Soils of the Culving, Serpen, and Kingmont series are among those that formed in serpentinitic rock.

The sandstone in the survey area can be grouped into two basic formations—the Swauk Formation, which is mainly in the southwestern part of the survey area, near Tronsen Ridge and Swauk Pass, and the Chumstick Formation, which is mainly along the Chiwauken Graben, south and west of the Entiat Fault and north and east of the Leavenworth Fault (Tabor and others, 1982). The Chiwaukum Graben covers an area in the central part of the survey area from Wenatchee to Leavenworth to Lake Wenatchee. The soils that formed in these two kinds of sandstone have much different characteristics. The sandstone of the Chumstick Formation is lighter in color and tends to be less resistant to weathering. The soils that formed in the Chumstick sandstone have less rock fragments in the profile and have a paralithic contact. Soils of the Nard, Yaxon, and Varelum series are among those that formed in this sandstone. The sandstone of the Swauk Formation is darker in color and tends to be more resistant to weathering than the Chumstick sandstone. The soils that formed in the Swauk sandstone generally have more rock fragments in the profile and have a lithic contact. Soils of the Scotties, Shaser, and Blewett series formed in this sandstone.

Granite, including granodiorite, occurs in three areas of the survey area—the Mount Stuart area, an area northwest of Lake Wenatchee, and an area north and northwest of Entiat. The soils that formed in granite or granodiorite on more stable landscapes commonly have less than 35 percent rock fragments in the profile, dominantly fine gravel-sized fragments, and have a paralithic contact. Soils of the Safety, Morical, Dragoon, and Georgecreek series are among those that formed in this material. The soils that formed in granite or granodiorite on more active or erosional landscapes generally have more than 35 percent rock fragments in the profile, dominantly larger sized fragments, and have a lithic contact. Soils of the McCree, Macreeing, Wilma, and Icicle series are among those that formed in this material.

Basalt occurs only in a few small areas scattered along the eastern edge of the survey area and as dikes and sills in the Chumstick Formation. The soils that formed in basalt are 10 to 60 inches deep, have more than 35 percent rock fragments in the profile, and commonly have a lithic contact. Soils of the Saydab, Anatone, Loneridge, and Stemilt series are among those that formed in basalt.

Glacial Deposits

During the Pleistocene epoch, alpine glaciers occupied parts of most of the major valleys in the survey area. Glacial drift, consisting mainly of till on side slopes and outwash gravel grading from moraines on valleys floors, is dominant on the broader segments of the Wenatchee Valley, east of Lake Wenatchee and near Leavenworth, and in the Lake Creek Basin, in the Entiat area (Tabor and others, 1980). Glacial till is unsorted, nonstratified material deposited directly by a glacier. It consists of a heterogeneous mixture of sand, silt, clay, and rock fragments. The mineralogy of the till normally is similar to that of the local bedrock. Most of the soils in the survey area that formed in glacial till have a mantle of volcanic ash and pumice that ranges in thickness from just a few inches to more than 60 inches. The soils that formed in volcanic ash and pumice over glacial till are dominantly sandy loam or cindery sandy loam over very gravelly sandy loam or very stony sandy loam. Soils of the Saska, Natapoc, Newbell, and Thow series are among those that formed in volcanic ash and pumice over glacial till. The Saska soils have a mantle of volcanic ash 14 to 24 inches thick over glacial till, and the Natapoc soils have a mantle of volcanic ash 18 to 24 inches thick over dense glacial till. These soils are classified as ashy over loamy-skeletal. The Newbell soils have a mantle of volcanic ash 7 to 14 inches thick over glacial till. They are classified as loamy-skeletal. The Thow soils have a mantle of volcanic ash and pumice more than 40 inches thick over glacial till. They are classified as ashy.

Glacial outwash from the melting glaciers has filled the valley bottoms and formed terraces. Glacial outwash consists mainly of sorted and stratified sand, gravel, and cobbles. Most of the soils in the survey area that formed in glacial outwash have a mantle of volcanic ash and pumice that ranges in thickness from just a few inches to more than 40 inches. The soils that formed in volcanic ash and pumice over glacial outwash are dominantly sandy loam or cindery sandy loam over extremely gravelly sand. Soils of the Chiwawa, Kladnick, and Marmont series are among those that formed in volcanic ash and pumice over glacial outwash. The Chiwawa soils have a mantle of volcanic ash more than 40 inches thick over glacial outwash. They are classified as ashy. The Kladnick soils have a mantle of volcanic ash 7 to 14 inches thick over glacial outwash. They are classified as sandy-skeletal. The Marmont soils have a mantle of volcanic ash 20 to 40 inches thick over glacial outwash. They are classified as cindery over sandy or sandy-skeletal.

Glaciolacustrine sediment is of limited extent in the survey area. Small glacial lakes formed as glaciers damned small side drainageways. Glaciolacustrine sediment consists of stratified silt, clay, and sand, and it commonly is in a complex with glacial till. Spodic Vitrixerands formed in lacustrine sediment. These soils are highly variable; no single pedon is representative of the soils. General characteristics are a mantle of sandy loam or loamy sand volcanic ash about 17 inches thick over silt loam and very fine sandy loam lacustrine sediment. Spodic Vitrixerands are mapped in complex with Saska soils.

Volcanic Ash and Pumice

The majority of the volcanic ash and pumice in the survey area is from Glacier Peak. Volcanic ash from Mt. Mazama and Mount St. Helens also occurs in minor amounts.

The oldest tephra deposit in the survey area is the Glacier Peak tephra layer G, which is dated about 11,670 years before present (Beget, 1984). This eruption of Glacier Peak created a plume that resulted in a blanket of white to gray gravel-sized pumice that covered the central one-third of the survey area. Tephra layer B, dated about 11,250 years before present, resulted in a blanket of yellowish gravel-sized pumice that covered generally the same area as layer G but on a slightly more southeasterly axis (Porter, 1978). Between layers G and B commonly are tephra layers F, C, N, M, and T, which make up a thin layer (3 to 8 inches thick) of loamy sand or sand volcanic ash. Above tephra layer B is a mantle of volcanic ash, which includes Mt. Mazama tephra layer O (dated about 6,900 years before present), Glacier Peak tephra set D (dated about 5,500 years before present), and Mount St. Helens tephra layers Yn (dated about 3,400 years before present) and Wn (dated about 450 years before present). This upper volcanic ash mantle generally is sandy loam or fine sandy loam with little, if any, pumice except where it is mixed with layer B below. Thickness of the upper mantle of volcanic ash ranges from about 10 to 30 inches, depending on the topographic position. Soils of the Totem, Fernow, Choralmont, and Wedge series are among those that formed in thick deposits of volcanic tephra. The Totem and Fernow soils have a mantle of volcanic ash 25 and 27 inches thick, respectively, over pumice layers B and G. These soils are classified as medial over pumiceous or cindery. The Choralmont and Wedge soils have a thinner mantle of volcanic ash over pumice layers B and G. These soils are classified as ashy-pumiceous.

Alluvium

The major streams in the survey area and many of the secondary streams have formed flood plains and stream terraces composed of recent alluvium. The characteristics of the alluvium are dependent on the velocity and volume of the floodwaters and on the soils and geology of the adjacent upland areas. The soils that formed in alluvium commonly have a profile of stratified textures because of variations in the velocity of the floodwater during deposition. Soils of the Mippon and Cryomont series are among those that formed in alluvium on flood plains. The

Cryomont soils are near the streams on the most active flood plains and have only a thin very stony fine sandy loam surface layer over very gravelly loamy sand and extremely gravelly coarse sand. The Mippon soils are on higher, less active flood plains and have a gravelly fine sandy loam surface layer 10 inches thick over very cobbly loamy sand and extremely cobbly loamy coarse sand. Alluvial fans are common in areas where relatively steep side drainageways emerge onto a nearly level valley bottom or terrace. Soils of the Billyridge, Burnscreek, Cashmont, and Zeb series are among those that formed on alluvial fans. The Billyridge and Cashmont soils are on the outer edges of the alluvial fans and are coarse-loamy. The Burnscreek and Zeb soils are on the upper parts of the alluvial fans and are loamy-skeletal.

Climate

Climate is a very important part of the soil-forming process. Precipitation and temperature are the primary climatic factors affecting soil development. Precipitation, or the amount of moisture entering the soil, influences the physical, chemical, and biological processes of soil formation. These processes include the weathering of minerals, production and decomposition of organic matter, movement of minerals and nutrients in the soil, and rate of soil erosion. The soil temperature influences the rate of these processes, especially the weathering of minerals and production and decomposition of organic matter.

The climate of the survey area is strongly influenced by the rainshadow created by the Cascade Mountain Range. On the west side of the survey area, near the crest of the Cascade Mountains, the average annual precipitation may range to 150 inches. Moving east, the precipitation decreases to about 9 inches near the city of Wenatchee. Temperatures are lower in the mountains and higher in the valleys. The average annual air temperature in the survey area ranges from about 35 to 50 degrees F, and the frost-free season ranges from 30 to 190 days. Generally, the precipitation increases with increasing elevation and the average annual air temperature and frost-free season decrease.

The precipitation and temperature in the survey area can be grouped into six broad climatic zones. These zones are defined in terms of the soil moisture regime, temperature regime, and dominant plant community.

Climatic Zone 1

The driest and warmest zone includes soils that have an aridic moisture regime bordering on xeric and a mesic temperature regime. Elevation is 1,200 to 4,800 feet. The average annual precipitation is 9 to 14 inches, and the average annual air temperature is 48 to 53 degrees. The frost-free season is 135 to 190 days. The vegetation is bunchgrass-shrub steppe.

The climate in this zone allows for sufficient accumulation of organic matter for the soils to develop a thin mollic epipedon. Carbonates generally have been leached to a depth of more than 40 inches, and the subsoil has been weathered and altered to form a cambic horizon. Soils of the Burch and Entiat series have a mollic epipedon and a cambic horizon. On older, more stable landscapes, a weak argillic horizon develops. Soils of the Cowiche and Bjork series have a mollic epipedon and an argillic horizon.

Climatic Zone 2

Soils that have an average annual precipitation of 12 to 18 inches, a xeric moisture regime, and a mesic temperature regime are in this zone. Elevation is 1,000 to 4,200 feet. The average annual air temperature is 45 to 50 degrees, and the frost-free season is 100 to 175 days. The vegetation is bunchgrass-shrub steppe.

The soils in this zone have a darker and thicker mollic epipedon, and most have a well-developed argillic horizon. Soils of the Morical, Yaxon, Borland, and Yaxing series are among those that have a mollic epipedon and an argillic horizon. Soils of the Yaxon and Yaxing series have a mollic epipedon that is more than 20 inches thick.

Climatic Zone 3

Forested soils that have an average annual precipitation of 15 to 32 inches, a xeric moisture regime, and a mesic temperature regime are in this zone. Elevation is 1,300 to 4,100 feet. The average annual air temperature is 45 to 49 degrees, and the frost-free season is 100 to 185 days.

The soils in this zone receive sufficient moisture to leach carbonates out of the profile and cations out of the upper part of the soil, resulting in lower base saturation. Soils of the Georgecreek, Dragoon, and Varelum series have lower base saturation than do the soils in zones 1 and 2, and they have an argillic horizon.

Climatic Zone 4

Colder forested soils that have an average annual precipitation of 15 to 75 inches, a xeric moisture regime, and a frigid temperature regime are in this zone. Elevation is 1,200 to 5,900 feet. The average annual air temperature is 41 to 46 degrees, and the frost-free season is 75 to 150 days.

Most of the soils in this zone are on younger landscapes that consist of glacial till and volcanic ash. The climate is sufficient to weather and alter the subsoil to form a cambic horizon and to leach cations, lowering the base saturation. Soils of the McCree, Choralmont, and Domkey series are among those that have lower base saturation and a cambic horizon. On older, stable landscapes, argillic horizons develop. Soils of the Nard series have lower base saturation and an argillic horizon.

Climatic Zones 5 and 6

The coldest forested soils are in two moisture regimes—xeric and udic. The forested soils that have an average annual precipitation of 22 to 75 inches, a xeric moisture regime, and a cryic temperature regime are in zone 5. Elevation is 2,500 to 6,500 feet. The average annual air temperature is 37 to 42 degrees, and the frost-free season is 45 to 110 days.

The soils receive sufficient moisture to leach cations, resulting in lower base saturation. The epipedon commonly is high in percentage of organic carbon but is too thin or light in color to be a mollic or umbric epipedon. Soils of the Naxing series are an exception; they have an umbric epipedon and a cambic horizon. Many of the soils in this zone have a weakly developed spodic horizon. Soils of the Almac and Wedge series are among those that have a spodic horizon.

The forested soils that have an average annual precipitation of 50 to 150 inches, a udic moisture regime, and a cryic temperature regime are in zone 6. Elevation is 2,100 to 8,000 feet. The average annual air temperature is 35 to 43 degrees, and the frost-free season is 45 to 110 days.

Most of the soils in this zone have a spodic horizon. The percentage of organic carbon in the surface layer is higher than that of the soils in zone 5; therefore, many of the soils in this zone have a darker and redder spodic horizon. Soils of the Chinkamin, Serene, and Fernow series are among those that have a well-developed spodic horizon.

Living Organisms

Living organisms are a significant factor in soil formation. Vegetation, microorganisms, and higher animals, including man, influence the rate and characteristics of certain chemical and physical processes of soil development. Vegetation is the most important biotic factor in soil formation because it is the principal source of organic matter. Accumulation and decomposition of organic matter result in the formation of A horizons and of O horizons in forested soils. Organic matter promotes structural development and stability, which is important for the movement of air and water in the soil. The available water capacity and the cation exchange capacity, or nutrient-supplying potential, are increased as a result of additions of organic matter. Plants cycle nutrients through the soil and provide cover, which helps to minimize runoff and erosion. Plant roots improve aeration and permeability by increasing the porosity of the soil.

Soil micro-organisms contribute to the decomposition of organic matter. Mineralization of nitrogen and fixation of atmospheric nitrogen, by micro-organisms alone or together with legumes, provide nutrients for plant growth. Micro-organisms also contribute to the transformation of phosphorous, sulfur, iron, and other elements in the soil.

Earthworms, rodents, insects, and other burrowing animals influence the accumulation and decomposition of organic matter. They also improve the aeration and permeability of the soil. They mix the soil material, which tends to accelerate the soil-forming processes and alterations.

Man's influence on soil formation can be substantial. Cultivation when the moisture content is high can result in puddling of fine-textured soils, which then dry into hard clods that are difficult to break down. Excessive cultivation, even when the moisture content is optimum, can compact the soil, destroying the natural aggregation and reducing the aeration and porosity. Conversion of previously forested soils into pastureland or hayland normally results in the darkening and thickening of the A horizon, especially in areas that are irrigated. Additions of organic matter, fertilizer, and other soil amendments will change many chemical and physical soil properties, such as pH, base saturation, and tilth. Cultivation on sloping soils, some logging practices, and other forms of soil disturbance that expose the mineral soil can accelerate runoff and erosion.

Distribution of vegetation in the survey area can be divided into the six broad zones described in detail in the previous climate section. The effects of vegetation on soil formation are difficult to separate from those of climate because the two factors are highly interdependent.

Rangeland soils that formed in the andic soil moisture zone generally have a minimal mollic epipedon because the vegetative cover is relatively sparse and thus additions of organic matter are small. The Burch and Cowiche soils have a thin mollic epipedon. Rangeland soils that formed in the xeric soil moisture zone have a thicker, darker colored mollic epipedon with greater structural development because the plant community is more productive and more organic matter is added to the soils. The Yaxon and Yaxing soils have a mollic epipedon that is more than 20 inches thick. Forested soils in this survey area generally have a thinner A horizon than do the rangeland soils. Most of the organic matter in forested soils is from litter on the soil surface. Conifer needles and many of the forestland shrubs decompose slowly, which contributes to the lack of a thick A horizon. In contrast, forested soils generally have a thicker O horizon than do rangeland soils. Base saturation and pH in forested soils generally are lower than those in rangeland soils. This is partly attributable to the higher precipitation and greater leaching in the forested regions, but other factors related directly to the forest vegetation also contribute to these differences. Organic acids produced from the decomposition of forest litter contribute to the acidity of the soil. Some decomposition products of forest litter act as chelating agents of iron and aluminum compounds, increasing the solubility of these compounds and resulting in lower base saturation and pH.

Topography

The configuration of the land surface, or topography, affects soil formation in numerous ways. Slope orientation, or aspect, affects the amount of solar radiation received in an area, which influences soil temperature and the rate of evapotranspiration. Soils on north- and east-facing slopes receive less solar radiation, resulting in a lower rate of evapotranspiration in these soils than in those soils on south-facing slopes. Thus, the soils on north- and east-facing slopes are cooler and moister and the soils on north-facing slopes commonly have a denser vegetative cover than do the soils on south-facing slopes. The denser vegetative cover can result in soils that have a higher content of organic matter, and it provides more protection from erosion. This protection from erosion results in two soil characteristics in the survey area—deeper soil depth and in the drier climatic zones, a thicker mantle of volcanic ash. On south-facing slopes, sparse vegetation and a higher rate of erosion result in shallow or moderately deep soils with little, if any, volcanic ash. Soils of the Borland and Tyee series are among those on south-facing slopes. They are 10 to 20 inches deep to bedrock and have little, if any, volcanic ash. Soils of the Yaxing and Palmont series are among those that are on north-facing slopes. These soils are more than 60 inches deep. The Palmont soils have a mantle of volcanic ash 7 to 14 inches thick.

Steepness of slope also has a strong influence on soil formation. Soils on steep slopes commonly have minimal profile development because the rate of removal of soil material by water erosion and colluvial movement is nearly as high as the rate of soil development. On gently sloping landscapes, formation of an argillic horizon is common. The Nard soils, which developed on stable landscapes, have an argillic horizon. The McCree soils, which developed on steeper, less stable landscapes, have a cambic horizon.

The position on the landscape can also affect the soil moisture regime. Most of the soils on uplands are well drained, but the soils in the low-lying positions, such as flood plains, low terraces, and valley bottoms, commonly have a high water table. The Mippon and Nardine soils have a seasonal high water table. The Mippon soils are along streams that receive extra moisture from upland areas. The Nardine soils are on broad valley bottoms adjacent to the gently sloping Nard soils. The Nardine soils receive extra moisture from the surrounding areas, causing the high water table.

Time

The weathering of rock and minerals and the development of soil horizons are partially dependent on time. The interaction of the other four soil-forming factors over time determines the degree of soil development. Generally, the more time a soil has been exposed to the soil-forming factors, the more developed it becomes. The oldest soils in the survey area are those that have not been glaciated and do not have a thick deposit of volcanic ash or loess. These include some of the soils that formed in basalt, granite, sandstone, gneiss, and schist. These soils may be more than 20,000 years old, but in all likelihood the soil-forming factors have not stayed the same during that entire time. Changes in climate and vegetation result in variations in the rate of soil development. Soils of the Nard, Georgecreek, and Ardenmont series are among those that formed in sandstone, granite and schist. These soils have an argillic horizon. The glaciers retreated about 14,000 to 12,000 years ago. The first volcanic layers from Glacier Peak were deposited on the landscape about 11,670 years ago. Soils that formed in volcanic ash and glacial material with volcanic ash have been exposed to soil development long enough to develop a cambic horizon. Soils of Choralmont, Nevine, and Palmich series are among those that formed in volcanic ash and glacial till. Soils in areas that have higher precipitation that formed in these same materials have developed a spodic horizon in the 3,400- to 6,900-year-old mantle of volcanic ash. Soils of the Fernow, Totem, and Chinkmin series are among those that are in the higher precipitation zone and have a spodic horizon. The youngest soils are those that formed in alluvium. These soils have not had enough time to develop any genetic horizons. Each flood episode deposits a fresh layer of alluvium on the soil surface, and the soil-forming processes must begin anew. Aeric Fluvaquents, Cryomont soils, and Aquic Cryumbrepts are among the soils that formed in recent alluvium.

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Glossary

Ablation till. Loose, permeable till deposited during the final downwasting of glacial ice. Lenses of crudely sorted sand and gravel are common.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvial cone. The material washed down the sides of mountains and hills by ephemeral streams and deposited at the mouth of gorges in the form of a moderately steep, conical mass descending equally in all directions from the point of issue.

Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 2.0
Low	2.0 to 3.75
Moderate	3.75 to 5.0
Moderately high	5.0 to 7.5
High	7.5 to 10.0
Very high	more than 10.0

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Basal till. Compact glacial till deposited beneath the ice.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bottom land. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Canyon. A long, deep, narrow, very steep sided valley with high, precipitous walls in an area of high local relief.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Cindery. Term used to modify a soil texture class that is more than 15 percent weakly cemented, gravel-sized pumice. The percent passing sieves is adjusted similarly to that for gravel.

Cirque. A semicircular, concave, bowllike area that has steep faces primarily resulting from glacial ice and snow abrasion.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. Area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Glacial outwash. Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till. Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur as kames, eskers, deltas, and outwash plains.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are interbedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame. An irregular, short ridge or hill of stratified glacial drift.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine. An accumulation of earth, stones, and other debris deposited by a glacier. Some types are terminal, lateral, medial, and ground.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Outwash plain. A landform of mainly sandy or coarse textured material of glaciofluvial origin. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plateau. An extensive upland mass with relatively flat summit area that is considerably elevated (more than 100 meters) above adjacent lowlands and separated from them on one or more sides by escarpments.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rock outcrop. Exposures of barren bedrock other than lava flows and rock-lined pits.

Root zone. The part of the soil that can be penetrated by plant roots.

Rubble land. Areas of cobbles, stones, and boulders, commonly at the base of mountains.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terminal moraine. A belt of thick glacial drift that generally marks the termination of important glacial advances.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Till plain. An extensive area of nearly level to undulating soils underlain by glacial till.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1961-90 at Leavenworth 3 S, Stehekin 3 NW, Stevens Pass, and Wenatchee, Washington)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	*Units*	*In*	*In*	*In*		*In*
LEAVENWORTH											
January-----	33.9	17.3	25.6	55	-14	1	5.09	2.07	7.64	11	35.0
February----	42.5	21.4	32.0	58	-6	4	2.98	1.33	4.39	6	14.0
March-------	52.7	27.0	39.8	70	11	58	2.06	0.90	3.04	5	4.7
April-------	62.5	33.3	47.9	82	22	240	1.20	0.45	1.83	3	0.3
May---------	72.6	39.7	56.1	94	28	499	0.73	0.23	1.15	2	0.0
June--------	80.0	46.4	63.2	99	35	697	0.66	0.30	1.03	2	0.0
July--------	88.0	50.1	69.1	104	37	899	0.31	0.08	0.63	1	0.0
August------	88.1	49.7	68.9	104	38	894	0.44	0.13	0.92	1	0.0
September---	78.1	41.8	59.9	97	28	598	0.76	0.31	1.26	2	0.0
October-----	63.6	33.1	48.4	84	20	263	1.87	0.65	3.02	4	0.1
November----	43.8	28.4	36.1	62	8	32	4.09	2.38	5.61	9	11.2
December----	33.0	19.3	26.2	51	-11	1	5.36	2.94	7.49	11	34.5
Yearly:											
Average---	61.6	34.0	47.8	---	---	---	---	---	---	---	---
Extreme---	108	-36	---	105	-20	---	---	---	---	---	---
Total-----	---	---	---	---	---	4,187	25.54	20.09	29.03	57	99.9

See footnote at end of table.

Table 1.--Temperature and Precipitation--Continued

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	*Units*	*In*	*In*	*In*		*In*
STEHEKIN											
January-----	33.5	23.7	28.6	50	1	1	6.42	3.06	9.32	11	48.0
February----	39.5	26.5	33.0	53	7	3	3.94	2.05	5.59	9	20.9
March-------	48.0	29.7	38.8	63	15	39	2.88	1.50	4.09	7	6.4
April-------	58.7	35.6	47.2	77	25	220	1.55	0.66	2.30	3	0.3
May---------	68.5	42.1	55.3	89	29	475	0.92	0.45	1.33	2	0.0
June--------	76.3	48.8	62.6	95	36	678	0.83	0.34	1.25	2	0.0
July--------	83.1	52.9	68.0	100	40	867	0.52	0.12	0.90	1	0.0
August------	82.4	53.0	67.7	99	39	860	0.94	0.24	1.68	2	0.0
September---	72.0	45.1	58.5	90	31	556	1.32	0.44	2.12	3	0.0
October-----	57.1	36.5	46.8	77	24	220	2.90	1.18	4.53	6	0.2
November----	41.7	30.5	36.1	57	15	24	6.17	3.54	8.51	12	13.1
December----	33.4	24.8	29.1	48	0	1	7.11	4.34	9.60	13	41.1
Yearly:											
Average---	57.9	37.4	47.6	---	---	---	---	---	---	---	---
Extreme---	105	-21	---	102	-5	---	---	---	---	---	---
Total-----	---	---	---	---	---	3,943	35.50	29.27	40.21	71	130.1

See footnote at end of table.

Table 1.--Temperature and Precipitation--Continued

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	*Units*	*In*	*In*	*In*		*In*
STEVENS PASS											
January-----	28.7	18.8	23.8	46	-5	1	13.94	6.59	20.28	16	111.6
February----	32.2	21.8	27.0	47	2	1	9.19	5.32	12.64	14	78.0
March-------	36.3	24.2	30.2	54	9	4	7.57	4.95	9.95	15	71.8
April-------	41.5	28.1	34.8	63	16	25	5.04	3.41	6.54	12	34.0
May---------	49.1	33.5	41.3	73	23	103	3.75	2.45	4.93	10	9.8
June--------	57.4	40.0	48.7	82	30	264	3.04	1.68	4.24	7	0.9
July--------	65.1	45.1	55.1	86	35	459	1.30	0.74	2.02	4	0.1
August------	65.5	46.5	56.0	86	35	463	2.11	0.68	3.28	4	0.0
September---	58.2	41.0	49.6	79	30	281	3.79	1.42	5.77	7	0.7
October-----	47.7	34.1	40.9	68	22	100	7.16	2.58	10.97	11	16.1
November----	33.9	24.8	29.3	52	7	4	12.43	7.13	17.15	21	65.9
December----	29.1	19.6	24.3	44	-6	0	13.82	8.59	18.54	18	96.4
Yearly:											
Average---	45.4	31.5	38.4	---	---	---	---	---	---	---	---
Extreme---	91	-25	---	90	-13	---	---	---	---	---	---
Total-----	---	---	---	---	---	1,706	83.14	59.13	89.94	139	485.2

See footnote at end of table.

Table 1.--Temperature and Precipitation--Continued

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	*°F*	*°F*	*°F*	*°F*	*Units*	*In*	*In*	*In*		*In*
WENATCHEE											
January-----	35.6	23.0	29.3	56	1	5	1.32	0.51	2.00	4	9.1
February----	43.9	27.6	35.8	61	9	22	0.85	0.24	1.34	2	4.0
March-------	55.5	33.4	44.5	71	20	163	0.60	0.15	0.95	2	0.9
April-------	64.6	40.1	52.4	82	29	371	0.57	0.21	0.95	1	0.0
May---------	73.4	47.6	60.5	92	34	631	0.48	0.12	0.77	1	0.0
June--------	81.3	55.0	68.2	98	42	843	0.55	0.14	0.91	1	0.0
July--------	88.3	59.8	74.0	103	46	1,052	0.24	0.06	0.51	0	0.0
August------	87.6	59.0	73.3	102	46	1,033	0.49	0.09	1.05	1	0.0
September---	78.0	50.1	64.0	95	36	721	0.41	0.08	0.88	1	0.0
October-----	64.0	39.9	52.0	81	26	372	0.47	0.11	0.85	1	0.0
November----	47.1	32.3	39.7	66	15	73	1.28	0.53	1.92	3	2.3
December----	36.2	25.1	30.6	57	1	6	1.56	0.64	2.34	5	10.6
Yearly:											
Average---	63.0	41.1	52.0	---	---	---	---	---	---	---	---
Extreme---	106	-19	---	104	-5	---	---	---	---	---	---
Total-----	---	---	---	---	---	5,292	8.82	7.14	10.33	22	27.0

*A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1961-90 at Leavenworth 3 S, Stehekin 3 NW, Stevens Pass, and Wenatchee, Washington)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
LEAVENWORTH			
Last freezing temperature in spring:			
1 year in 10 later than--	April 26	May 9	May 25
2 years in 10 later than--	April 18	May 4	May 21
5 years in 10 later than--	April 3	April 27	May 15
First freezing temperature in fall:			
1 year in 10 earlier than--	October 9	September 19	September 7
2 years in 10 earlier than--	October 14	September 25	September 13
5 years in 10 earlier than--	October 25	October 6	September 23
STEHEKIN			
Last freezing temperature in spring:			
1 year in 10 later than--	April 3	May 6	May 22
2 years in 10 later than--	March 26	April 29	May 15
5 years in 10 later than--	March 10	April 15	May 3
First freezing temperature in fall:			
1 year in 10 earlier than--	October 24	October 2	September 13
2 years in 10 earlier than--	November 1	October 9	September 19
5 years in 10 earlier than--	November 17	October 22	October 3

Table 2.--Freeze Dates in Spring and Fall--Continued

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
STEVENS PASS			
Last freezing temperature in spring:			
1 year in 10 later than--	May 10	May 28	June 27
2 years in 10 later than--	May 4	May 23	June 20
5 years in 10 later than--	April 22	May 14	June 7
First freezing temperature in fall:			
1 year in 10 earlier than--	October 14	September 28	September 10
2 years in 10 earlier than--	October 21	October 4	September 15
5 years in 10 earlier than--	November 3	October 15	September 26
WENATCHEE			
Last freezing temperature in spring:			
1 year in 10 later than--	March 18	April 5	April 29
2 years in 10 later than--	March 12	March 29	April 24
5 years in 10 later than--	February 28	March 15	April 15
First freezing temperature in fall:			
1 year in 10 earlier than--	October 31	October 16	October 2
2 years in 10 earlier than--	November 7	October 23	October 9
5 years in 10 earlier than--	November 21	November 5	October 22

Table 3.--Growing Season

(Recorded in the period 1961-90 at Leavenworth 3 S, Stehekin 3 NW, Stevens Pass, and Wenatchee, Washington)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	*Days*	*Days*
LEAVENWORTH			
9 years in 10	181	139	116
8 years in 10	189	147	121
5 years in 10	203	162	132
2 years in 10	218	177	143
1 year in 10	225	185	149
STEHEKIN			
9 years in 10	213	152	119
8 years in 10	226	165	131
5 years in 10	251	189	153
2 years in 10	277	214	175
1 year in 10	290	226	187
STEVENS PASS			
9 years in 10	161	134	91
8 years in 10	173	140	99
5 years in 10	194	154	114
2 years in 10	216	167	129
1 year in 10	227	174	137
WENATCHEE			
9 years in 10	240	203	161
8 years in 10	248	214	170
5 years in 10	266	234	188
2 years in 10	283	254	207
1 year in 10	291	265	216

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Chelan County	Okanogan County	Total	
				Area	Extent
		Acres	*Acres*	*Acres*	*Pct*
1	Aeric Fluvaquents, nearly level*	5,303	70	5,373	0.4
2	Almac fine sandy loam, 3 to 30 percent slopes	2,161	---	2,161	0.1
3	Almac fine sandy loam, 30 to 60 percent slopes	3,774	---	3,774	0.2
4	Almac fine sandy loam, moist, 30 to 60 percent slopes	5,978	---	5,978	0.4
5	Almac-Azwell association, 30 to 60 percent slopes*	5,326	---	5,326	0.3
6	Almac-Azwell-Rock outcrop association, 45 to 90 percent slopes*	1,760	---	1,760	0.1
7	Almac-Rock outcrop complex, 45 to 90 percent slopes	3,521	---	3,521	0.2
8	Alnult-Reggad complex, 45 to 90 percent slopes	1,609	---	1,609	0.1
9	Altapeak gravelly sandy loam, 3 to 30 percent slopes	272	---	272	**
10	Altapeak gravelly sandy loam, 30 to 60 percent slopes	2,441	---	2,441	0.2
11	Altapeak gravelly sandy loam, 60 to 90 percent slopes	207	---	207	**
12	Altapeak gravelly sandy loam, warm, 30 to 60 percent slopes	700	---	700	**
13	Altapeak-Alnult association, 30 to 60 percent slopes*	6,920	---	6,920	0.5
14	Altapeak-Alnult association, 60 to 90 percent slopes*	870	---	870	**
15	Altapeak, warm-Alnult association, 30 to 60 percent slopes*	5,770	---	5,770	0.4
16	Anatone-Blewett complex, 30 to 60 percent slopes	600	---	600	**
17	Anatone-Rock outcrop complex, 30 to 60 percent slopes	1,431	---	1,431	**
18	Andic Cryochrepts, very steep*	39,501	---	39,501	2.6
19	Andic Cryumbrepts, deep, steep*	4,329	---	4,329	0.3
20	Andic Cryumbrepts, steep*	432	---	432	**
21	Andic Cryumbrepts-Haplocryods-Rock outcrop complex, steep and very steep*	121,941	---	121,941	8.0
22	Andic Cryumbrepts-Rock outcrop complex, steep and very steep*	13,079	---	13,079	0.9
23	Andic Cryumbrepts, moist-Rock outcrop complex, steep and very steep*	4,696	---	4,696	0.3
24	Andic Haplumbrepts-Rock outcrop complex, very steep*	3,725	---	3,725	0.2
25	Angle stony loamy sand, 60 to 90 percent slopes	597	---	597	**
26	Aquic Cryumprepts, nearly level to gently sloping*	4,403	---	4,403	0.3
27	Ardening stony loam, 30 to 60 percent slopes	1,139	---	1,139	**
28	Ardenmont coarse sandy loam, 8 to 30 percent slopes	428	---	428	**
29	Ardenmont coarse sandy loam, 30 to 60 percent slopes	14,345	---	14,345	0.9
30	Ardenmont coarse sandy loam, 60 to 90 percent slopes	2,812	---	2,812	0.2
31	Ardenmont-Swakane complex, 60 to 90 percent slopes	1,408	---	1,408	**
32	Ardenvoir stony fine sandy loam, 30 to 60 percent slopes	3,429	---	3,429	0.2
33	Ardenvoir stony fine sandy loam, 60 to 90 percent slopes	1,979	---	1,979	0.1

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total	
				Area	Extent
		Acres	*Acres*	*Acres*	*Pct*
34	Azwell-Rock outcrop complex, 30 to 60 percent slopes	4,601	---	4,601	0.3
35	Bagmont gravelly loam, 40 to 90 percent slopes	365	---	365	**
36	Bigcreek cindery sandy loam, 0 to 8 percent slopes	608	---	608	**
37	Billyridge gravelly sandy loam, 0 to 8 percent slopes	1,894	93	1,987	0.1
38	Billyridge gravelly sandy loam, 8 to 15 percent slopes	506	---	506	**
39	Billyridge gravelly sandy loam, 15 to 25 percent slopes	253	---	253	**
40	Bisping fine sandy loam, 3 to 15 percent slopes	68	---	68	**
41	Bisping fine sandy loam, 15 to 30 percent slopes	3,365	---	3,365	0.2
42	Bisping fine sandy loam, 30 to 60 percent slopes	1,900	---	1,900	0.1
43	Bjork loam, 30 to 65 percent slopes	2,673	---	2,673	0.2
44	Bjork-Rock outcrop complex, 25 to 75 percent slopes	301	---	301	**
45	Blag-Cle Elum-Rock outcrop complex, 30 to 75 percent slopes	15,364	---	15,364	1.0
46	Blag-Rock outcrop complex, 30 to 80 percent slopes	9,645	---	9,645	0.6
47	Blewett-Rock outcrop complex, 30 to 60 percent slopes	8,738	---	8,738	0.6
48	Borland loam, 30 to 60 percent slopes	1,005	---	1,005	**
49	Borland-Rock outcrop complex, 30 to 60 percent slopes	3,160	---	3,160	0.2
50	Brief gravelly sandy loam, 0 to 15 percent slopes	427	150	577	**
51	Brisky-Rock outcrop complex, 30 to 60 percent slopes	9,744	---	9,744	0.6
52	Burch loam, 3 to 8 percent slopes	99	---	99	**
53	Burnscreek stony sandy loam, 3 to 30 percent slopes	1,082	349	1,431	**
54	Burrant loam, 3 to 8 percent slopes	18	---	18	**
55	Burrant loam, 8 to 25 percent slopes	98	---	98	**
56	Cashmont sandy loam, 0 to 8 percent slopes	205	---	205	**
57	Cashmont gravelly sandy loam, 8 to 25 percent slopes	104	---	104	**
58	Chapot extremely bouldery loam, 30 to 60 percent slopes	368	---	368	**
59	Chinkmin bouldery fine sandy loam, 3 to 30 percent slopes	375	---	375	**
60	Chinkmin bouldery fine sandy loam, 30 to 60 percent slopes	904	---	904	**
61	Chinkmin-Altapeak association, 3 to 30 percent slopes*	2,690	---	2,690	0.2
62	Chinkmin-Altapeak association, 30 to 60 percent slopes*	800	---	800	**
63	Chiwaukum stony sandy loam, 3 to 30 percent slopes	403	---	403	**
64	Chiwaukum bouldery fine sandy loam, 30 to 60 percent slopes	5,542	---	5,542	0.4
65	Chiwaukum bouldery fine sandy loam, 3 to 30 percent south slopes	171	---	171	**
66	Chiwaukum very bouldery fine sandy loam, 8 to 30 percent slopes	335	---	335	**

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total Area	Total Extent
		Acres	*Acres*	*Acres*	*Pct*
67	Chiwaukum association, 3 to 30 percent slopes*	1,640	---	1,640	0.1
68	Chiwaukum association, 30 to 60 percent slopes*	11,330	---	11,330	0.7
69	Chiwawa cindery fine sandy loam, 0 to 3 percent slopes	239	---	239	**
70	Choralmont association, 30 to 60 percent slopes*	410	---	410	**
71	Choralmont cindery sandy loam, 3 to 30 percent slopes	912	---	912	**
72	Choralmont cindery sandy loam, 30 to 60 percent slopes	9,818	---	9,818	0.6
73	Choralmont cindery sandy loam, till substratum, 3 to 30 percent slopes	6,402	---	6,402	0.4
74	Choralmont cindery sandy loam, till substratum, 30 to 60 percent slopes	17,153	---	17,153	1.1
75	Choralmont-Limking complex, 30 to 60 percent slopes	570	---	570	**
76	Chumstick stony sandy loam, 3 to 30 percent slopes	364	---	364	**
77	Chumstick stony sandy loam, 30 to 60 percent slopes	6,476	---	6,476	0.4
78	Chumstick stony sandy loam, 60 to 90 percent slopes	2,190	---	2,190	0.1
79	Cle Elum loam, 30 to 60 percent slopes	1,101	---	1,101	**
80	Cle Elum loam, 30 to 60 percent south slopes	6,665	---	6,665	0.4
81	Coopmont fine sandy loam, 3 to 30 percent slopes	416	1,092	1,508	**
82	Coopmont fine sandy loam, 30 to 60 percent slopes	6,237	894	7,131	0.5
83	Cowiche complex, 3 to 25 percent slopes	131	---	131	**
84	Cowiche complex, 25 to 70 percent slopes	2,201	---	2,201	0.1
85	Cryomont stony fine sandy loam, 0 to 5 percent slopes	223	---	223	**
86	Cryomont stony fine sandy loam, 5 to 30 percent slopes	192	---	192	**
87	Cryomont association, 0 to 30 percent slopes*	2,420	---	2,420	0.2
88	Culving-Rock outcrop complex, 30 to 60 percent slopes	4,867	---	4,867	0.3
89	Culvop very gravelly loam, 30 to 60 percent slopes	723	---	723	**
90	Devore-Rock outcrop complex, 50 to 75 percent slopes	13,744	---	13,744	0.9
91	Dinkelman gravelly sandy loam, 30 to 60 percent slopes	2,509	---	2,509	0.2
92	Dinkelman gravelly sandy loam, 60 to 90 percent slopes	2,203	---	2,203	0.1
93	Dinkelman-Rock outcrop complex, 30 to 90 percent slopes	2,970	---	2,970	0.2
94	Dinkels fine sandy loam, 8 to 15 percent slopes	70	---	70	**
95	Dinkels fine sandy loam, 15 to 30 percent slopes	200	---	200	**
96	Dinkels gravelly sandy loam, 45 to 70 percent slopes	1,276	---	1,276	**
97	Domkey sandy loam, 5 to 30 percent slopes	0	323	323	**
98	Domkey sandy loam, 30 to 60 percent slopes	1,668	598	2,266	0.1
99	Domkey-McCree complex, 30 to 60 percent slopes	952	336	1,288	**

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total	
				Area	Extent
		Acres	*Acres*	*Acres*	*Pct*
100	Dragoon fine sandy loam, 30 to 60 percent slopes	1,864	---	1,864	0.1
101	Dragoon loam, 30 to 60 percent slopes	826	---	826	**
102	Entiat gravelly fine sandy loam, 30 to 75 percent slopes	387	---	387	**
103	Entiat-Rock outcrop complex, 30 to 75 percent slopes	453	---	453	**
104	Entic Haplumbrepts, 30 to 75 percent slopes	3,633	---	3,633	0.2
105	Esmeralda bouldery sandy loam, 30 to 60 percent slopes	1,530	---	1,530	**
106	Esmeralda-Rock outcrop complex, 30 to 75 percent slopes	4,230	---	4,230	0.3
107	Fears stony fine sandy loam, 30 to 60 percent slopes	44,891	252	45,143	2.9
108	Fears-Devore association, 30 to 60 percent slopes*	18,164	---	18,164	1.2
109	Fernow loam, 3 to 30 percent slopes	1,657	---	1,657	0.1
110	Fernow loam, 30 to 60 percent slopes	3,054	---	3,054	0.2
111	Fernow-Serene association, 30 to 60 percent slopes*	8,200	---	8,200	0.5
112	Fluvaquents, nearly level*	757	---	757	**
113	Georgecreek fine sandy loam, 3 to 15 percent slopes	47	---	47	**
114	Georgecreek fine sandy loam, 15 to 30 percent slopes	242	---	242	**
115	Georgecreek fine sandy loam, 30 to 60 percent slopes	382	---	382	**
116	Georgecreek-Dragoon complex, 3 to 15 percent slopes	100	---	100	**
117	Georgecreek-Dragoon complex, 15 to 30 percent slopes	494	---	494	**
118	Gilpar very stony sandy loam, 30 to 60 percent slopes	509	---	509	**
119	Gilpar-Nimue association, 30 to 60 percent slopes*	3,570	---	3,570	0.2
120	Gilpar-Nimue-Rock outcrop association, 45 to 90 percent slopes*	940	---	940	**
121	Gilpar-Rock outcrop complex, 45 to 90 percent slopes	521	---	521	**
122	Glaciers, snowfields	8,614	---	8,614	0.6
123	Goffpeak cindery sandy loam, 30 to 60 percent slopes	4,312	---	4,312	0.3
124	Goffpeak-Fears association, 30 to 60 percent slopes*	1,800	---	1,800	0.1
125	Haplocryods complex, gently sloping to steep*	8,307	---	8,307	0.5
126	Haplocryods-Andic Cryochrepts-Rock outcrop complex, steep and very steep*	20,863	---	20,863	1.4
127	Haploxerolls, moderately steep*	163	---	163	**
128	Haploxerolls, very steep*	574	---	574	**
129	Humicryods-Andic Cryumbrepts complex, gently sloping to moderately steep*	3,976	---	3,976	0.3
130	Humicryods-Andic Cryochrepts-Rock outcrop complex, steep and very steep*	45,634	---	45,634	3.0
131	Humicryods-Andic Cryumbrepts-Rock outcrop complex, steep and very steep*	65,073	---	65,073	4.2
132	Hyprairie silt loam, 25 to 45 percent slopes	113	---	113	**
133	Hyprairie silt loam, 45 to 65 percent slopes	436	---	436	**
134	Hyprairie-Oldbutte complex, 45 to 65 percent slopes	609	---	609	**
135	Icicle association, 30 to 60 percent slopes*	360	---	360	**

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total	
				Area	Extent
		Acres	Acres	Acres	Pct
136	Icicle bouldery sandy loam, 30 to 60 percent slopes	1,319	---	1,319	**
137	Icicle very bouldery sandy loam, 3 to 30 percent slopes	784	---	784	**
138	Icicle very bouldery sandy loam, 30 to 75 percent slopes	4,308	---	4,308	0.3
139	Icicle stony fine sandy loam, 30 to 60 percent slopes	632	---	632	**
140	Icicle-Chumstick-Rock outcrop association, 45 to 90 percent slopes*	3,349	---	3,349	0.2
141	Icicle-Chumstick-Rock outcrop complex, 45 to 90 percent slopes	7,267	---	7,267	0.5
142	Inkler stony fine sandy loam, 30 to 60 percent slopes	9,084	---	9,084	0.6
143	Isella-Fernow association, 3 to 30 percent slopes*	680	---	680	**
144	Isella-Fernow association, 30 to 60 percent slopes*	3,694	---	3,694	0.2
145	Isella-Nimue association, 3 to 30 percent slopes*	313	---	313	**
146	Isella-Nimue association, 30 to 60 percent slopes*	3,208	---	3,208	0.2
147	Kingmont gravelly loam, 30 to 60 percent slopes	1,874	---	1,874	0.1
148	Kladnick cobbly fine sandy loam, 0 to 8 percent slopes	880	---	880	**
149	Kladnick gravelly fine sandy loam, 3 to 30 percent slopes	314	---	314	**
150	Kladnick very stony sandy loam, 3 to 15 percent slopes	806	---	806	**
151	Klapatche-Altapeak association, 30 to 60 percent slopes*	4,959	---	4,959	0.3
152	Kloochman gravelly fine sandy loam, 3 to 30 percent slopes	514	---	514	**
153	Kloochman gravelly fine sandy loam, 30 to 60 percent slopes	1,429	---	1,429	**
154	Kloochman gravelly fine sandy loam, 60 to 90 percent slopes	216	---	216	**
155	Kloochman-Inkler association, 30 to 60 percent slopes*	210	---	210	**
156	Kloochman-Inkler-Rock outcrop association, 45 to 75 percent slopes*	767	---	767	**
157	Kloochman-Rock outcrop complex, 45 to 75 percent slopes	3,983	---	3,983	0.3
158	Limking stony loam, 30 to 60 percent slopes	3,120	---	3,120	0.2
159	Limking-Coopmont association, 30 to 60 percent slopes*	400	---	400	**
160	Limking-Coopmont complex, 30 to 60 percent slopes	5,882	---	5,882	0.4
161	Limking-Coopmont-Rock outcrop association, 30 to 60 percent slopes*	650	---	650	**
162	Limking-Rock outcrop complex, 30 to 60 percent slopes	5,466	---	5,466	0.4
163	Line cindery fine sandy loam, 3 to 30 percent slopes	1,742	---	1,742	0.1
164	Line gravelly fine sandy loam, 3 to 30 percent slopes	1,138	---	1,138	**
165	Line stony fine sandy loam, 30 to 60 percent slopes	747	---	747	**

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total Area	Total Extent
		Acres	*Acres*	*Acres*	*Pct*
166	Line-Vabbing association, 3 to 30 percent slopes*------------------------------------	410	---	410	**
167	Loneridge stony loam, 3 to 30 percent slopes	923	---	923	**
168	Loneridge stony loam, 3 to 30 percent north slopes-------------------------------------	480	---	480	**
169	Loneridge very stony loam, 30 to 60 percent slopes-------------------------------------	1,654	---	1,654	0.1
170	Macreeing stony fine sandy loam, 30 to 60 percent slopes-----------------------------	1,888	---	1,888	0.1
171	Macreeing stony fine sandy loam, 60 to 90 percent slopes-----------------------------	148	---	148	**
172	Macreeing-Rock outcrop complex, 45 to 90 percent slopes-----------------------------	1,011	---	1,011	**
173	Mansonia fine sandy loam, 30 to 60 percent slopes-------------------------------------	1,100	---	1,100	**
174	Mansonia-Swakane-Rock outcrop complex, 8 to 45 percent slopes--------------------------	1,233	481	1,714	0.1
175	Mansonia-Swakane-Rock outcrop complex, 45 to 90 percent slopes--------------------------	5,421	---	5,421	0.4
176	Marmont cindery fine sandy loam, 3 to 15 percent slopes-----------------------------	275	---	275	**
177	Marmont cindery fine sandy loam, 15 to 30 percent slopes-----------------------------	112	---	112	**
178	Marmont cindery fine sandy loam, 30 to 75 percent slopes-----------------------------	171	---	171	**
179	McCree stony fine sandy loam, 8 to 30 percent slopes-------------------------------------	117	---	117	**
180	McCree stony fine sandy loam, 30 to 60 percent slopes-----------------------------	8,350	1,196	9,546	0.6
181	McCree stony fine sandy loam, 60 to 90 percent slopes-----------------------------	344	---	344	**
182	McCree-Palmich complex, 30 to 60 percent slopes-------------------------------------	12,146	---	12,146	0.8
183	McCree-Palmont-Rock outcrop association, 45 to 90 percent slopes*-----------------------	806	---	806	**
184	McCree-Rock outcrop complex, 45 to 90 percent slopes-------------------------------------	13,691	---	13,691	0.9
185	Mippon gravelly fine sandy loam, 0 to 3 percent slopes-----------------------------	823	---	823	**
186	Mippon very gravelly loamy fine sand, 0 to 3 percent slopes-----------------------------	751	---	751	**
187	Mippon very bouldery loamy sand, 0 to 3 percent slopes-----------------------------	341	---	341	**
188	Morical fine sandy loam, 3 to 15 percent slopes-------------------------------------	11	---	11	**
189	Morical fine sandy loam, 15 to 30 percent slopes-------------------------------------	111	---	111	**
190	Morical fine sandy loam, 30 to 60 percent slopes-------------------------------------	74	---	74	**
191	Morical-Dragoon complex, 30 to 60 percent slopes-------------------------------------	835	---	835	**
192	Morical-Dragoon fine sandy loams, 3 to 30 percent slopes-----------------------------	640	---	640	**
193	Morical-Dragoon fine sandy loams, 30 to 60 percent slopes-----------------------------	3,630	---	3,630	0.2
194	Morical-Dragoon fine sandy loams, 60 to 90 percent slopes-----------------------------	200	---	200	**
195	Mountaineer stony sandy loam, 30 to 60 percent slopes-----------------------------	2,243	---	2,243	0.1

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total	
				Area	Extent
		Acres	*Acres*	*Acres*	*Pct*
196	Mountaineer-Rock outcrop complex, 45 to 90 percent slopes	3,413	---	3,413	0.2
197	Mountaineer-Tillicum-Rock outcrop association, 45 to 90 percent slopes*	6,232	---	6,232	0.4
198	Nahahum loam, 30 to 60 percent slopes	2,465	---	2,465	0.2
199	Nahahum-Taneum complex, 30 to 60 percent slopes	940	---	940	**
200	Nard sandy loam, 3 to 30 percent slopes	4,637	---	4,637	0.3
201	Nard sandy loam, 30 to 60 percent slopes	54,450	---	54,450	3.6
202	Nard-Blag complex, 30 to 60 percent slopes	1,005	---	1,005	**
203	Nard-Brisky complex, 30 to 60 percent slopes	4,467	---	4,467	0.3
204	Nardine loam, 0 to 8 percent slopes	206	---	206	**
205	Nardmont loam, 3 to 30 percent slopes	220	---	220	**
206	Nardmont loam, 30 to 60 percent slopes	1,423	---	1,423	**
207	Natapoc stony sandy loam, 3 to 30 percent slopes	1,800	---	1,800	0.1
208	Natapoc stony sandy loam, 30 to 60 percent slopes	282	---	282	**
209	Natapoc-Thow association, 30 to 60 percent slopes*	650	---	650	**
210	Naxing very stony loam, 5 to 30 percent slopes	672	---	672	**
211	Naxing very stony loam, 30 to 60 percent slopes	2,032	---	2,032	0.1
212	Newbell bouldery sandy loam, 30 to 60 percent slopes	956	---	956	**
213	Nimue bouldery sandy loam, 60 to 90 percent slopes	842	---	842	**
214	Nimue cobbly fine sandy loam, 30 to 60 percent slopes	1,783	---	1,783	0.1
215	Nimue-Rock outcrop complex, 45 to 90 percent slopes	3,073	---	3,073	0.2
216	Nimue association, 30 to 60 percent slopes*	11,950	---	11,950	0.8
217	Nimue-Rock outcrop association, 45 to 90 percent slopes*	6,563	---	6,563	0.4
218	Oldbutte silt loam, 3 to 8 percent slopes	245	---	245	**
219	Oldbutte silt loam, 45 to 65 percent slopes	729	---	729	**
220	Palmich cindery sandy loam, 15 to 30 percent slopes	1,160	---	1,160	**
221	Palmich cindery sandy loam, 30 to 60 percent slopes	13,709	---	13,709	0.9
222	Palmich cindery sandy loam, 60 to 90 percent slopes	2,166	---	2,166	0.1
223	Palmich-McCree association, 30 to 60 percent slopes*	1,120	---	1,120	**
224	Palmich-McCree-Rock outcrop association, 30 to 60 percent slopes*	750	---	750	**
225	Palmich-Rock outcrop complex, 30 to 60 percent slopes	896	---	896	**
226	Palmont cobbly fine sandy loam, 30 to 60 percent slopes	855	---	855	**
227	Palmont cobbly fine sandy loam, 60 to 90 percent slopes	1,412	---	1,412	**
228	Palmont very stony fine sandy loam, 30 to 60 percent slopes	505	---	505	**
229	Palmont-Rock outcrop complex, 45 to 90 percent slopes	456	---	456	**
230	Ramparter stony sandy loam, 30 to 60 percent slopes	465	---	465	**

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total	
				Area	Extent
		Acres	*Acres*	*Acres*	*Pct*
231	Ramparter stony sandy loam, till substratum, 5 to 30 percent slopes	698	---	698	**
232	Ramparter stony sandy loam, till substratum, 30 to 60 percent slopes	6,403	---	6,403	0.4
233	Ramparter stony sandy loam, till substratum, 60 to 90 percent slopes	238	---	238	**
234	Ramparter very fine sandy loam, 5 to 30 percent slopes	372	---	372	**
235	Ramparter very fine sandy loam, 30 to 60 percent slopes	11,091	---	11,091	0.7
236	Ramparter-Wilma complex, 30 to 60 percent slopes	9,953	---	9,953	0.6
237	Reggad extremely stony muck, 45 to 90 percent slopes	2,641	---	2,641	0.2
238	Reggad-Serene association, 45 to 90 percent slopes*	8,590	---	8,590	0.6
239	Rock outcrop	35,445	---	35,445	2.3
240	Rock outcrop-Blewett complex, 30 to 60 percent slopes	392	---	392	**
241	Rock outcrop-Borland complex, 45 to 90 percent slopes	1,348	---	1,348	**
242	Rock outcrop-Chumstick-Icicle complex, 45 to 90 percent slopes	17,274	273	17,547	1.1
243	Rock outcrop-Chumstick-Icicle association, 45 to 90 percent slopes*	10,867	---	10,867	0.7
244	Rock outcrop-Rubble land-Glaciers, snowfields complex	111,024	---	111,024	7.2
245	Rock outcrop-Rubble land-Serene complex, 45 to 90 percent slopes	1,529	50	1,579	0.1
246	Rubble land-Rock outcrop complex	25,392	1,074	26,466	1.7
247	Safety stony sandy loam, 8 to 30 percent slopes	0	282	282	**
248	Safety stony sandy loam, 30 to 60 percent slopes	6,202	249	6,451	0.4
249	Safety stony sandy loam, 60 to 90 percent slopes	1,283	---	1,283	**
250	Safety-Rock outcrop complex, 30 to 60 percent slopes	458	---	458	**
251	Saska stony sandy loam, 3 to 30 percent slopes	2,225	---	2,225	0.1
252	Saska stony sandy loam, 30 to 60 percent slopes	5,474	---	5,474	0.4
253	Saska bouldery sandy loam, 3 to 30 percent slopes	880	---	880	**
254	Saska bouldery sandy loam, 30 to 60 percent slopes	3,500	---	3,500	0.2
255	Saska very bouldery sandy loam, 3 to 30 percent slopes	326	---	326	**
256	Saska very bouldery sandy loam, 30 to 60 percent slopes	1,997	---	1,997	0.1
257	Saska-Rock outcrop complex, 30 to 60 percent slopes	15,133	---	15,133	1.0
258	Saska association, 3 to 30 percent slopes*	1,745	---	1,745	0.1
259	Saska association, 3 to 30 percent south slopes*	380	---	380	**
260	Saska association, 30 to 60 percent slopes*	5,515	---	5,515	0.4
261	Saska-Rock outcrop association, 30 to 60 percent slopes*	3,570	---	3,570	0.2
262	Saska, south-Rock outcrop association, 30 to 60 percent slopes*	965	---	965	**

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total Area	Total Extent
		Acres	Acres	Acres	Pct
263	Saydab extremely stony loam, 3 to 30 percent slopes	955	---	955	**
264	Scotties gravelly loam, 30 to 60 percent slopes	12,438	---	12,438	0.8
265	Serene gravelly sandy loam, 30 to 60 percent slopes	557	---	557	**
266	Serene-Rock outcrop complex, 45 to 90 percent slopes	1,550	---	1,550	0.1
267	Serpen very gravelly loam, 15 to 30 percent slopes	240	---	240	**
268	Serpen very gravelly loam, 30 to 60 percent slopes	3,839	---	3,839	0.3
269	Shadypass very cindery sandy loam, 30 to 60 percent slopes	2,058	---	2,058	0.1
270	Shamel sandy loam, 30 to 60 percent slopes	1,154	---	1,154	**
271	Shamel sandy loam, 60 to 90 percent slopes	456	---	456	**
272	Shamel-Rock outcrop complex, 40 to 90 percent slopes	945	---	945	**
273	Shaser-Blewett complex, 30 to 60 percent slopes	1,686	---	1,686	0.1
274	Shaser-Brisky complex, 30 to 60 percent slopes	2,257	---	2,257	0.1
275	Shaser-Chapot complex, 30 to 60 percent slopes	14,344	---	14,344	0.9
276	Skipeak gravelly sandy loam, 5 to 30 percent slopes	340	---	340	**
277	Skipeak-Line association, 5 to 30 percent slopes*	790	---	790	**
278	Soda stony sandy loam, 8 to 30 percent slopes	877	---	877	**
279	Soda bouldery sandy loam, 30 to 60 percent slopes	6,285	---	6,285	0.4
280	Soda very bouldery sandy loam, 30 to 60 percent slopes	3,141	---	3,141	0.2
281	Soda bouldery fine sandy loam, 3 to 30 percent slopes	1,111	---	1,111	**
282	Soda bouldery fine sandy loam, 30 to 60 percent slopes	773	---	773	**
283	Soda-Rock outcrop complex, 45 to 90 percent slopes	229	---	229	**
284	Soda, cold-Rock outcrop complex, 30 to 60 percent slopes	3,595	---	3,595	0.2
285	Soda association, 8 to 30 percent slopes*	300	---	300	**
286	Soda association, 30 to 60 percent slopes*	1,510	---	1,510	**
287	Soda-Rock outcrop association, 30 to 60 percent slopes*	3,550	---	3,550	0.2
288	Sodacreek bouldery fine sandy loam, 25 to 45 percent slopes	688	---	688	**
289	Sodacreek-Rock outcrop complex, 45 to 90 percent slopes	306	---	306	**
290	Spodic Vitrixerands-Saska complex, 3 to 30 percent slopes*	185	---	185	**
291	Spodic Vitrixerands-Saska complex, 30 to 60 percent slopes*	457	---	457	**
292	Stemilt stony loam, 3 to 30 percent slopes	141	---	141	**
293	Stemilt stony loam, 30 to 60 percent slopes	1,048	---	1,048	**
294	Surgh fine sandy loam, 3 to 30 percent slopes	247	---	247	**
295	Surgh fine sandy loam, 30 to 60 percent slopes	4,643	---	4,643	0.3
296	Surgh fine sandy loam, 60 to 90 percent slopes	219	---	219	**
297	Surgh-Wedge complex, 8 to 30 percent slopes	1,035	---	1,035	**

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total	
				Area	Extent
		Acres	*Acres*	*Acres*	*Pct*
298	Swakane stony sandy loam, 30 to 60 percent slopes	2,095	---	2,095	0.1
299	Swakane stony sandy loam, 60 to 90 percent slopes	9,528	---	9,528	0.6
300	Swakane, granitic substratum-Rock outcrop complex, 40 to 90 percent slopes	3,366	---	3,366	0.2
301	Swakane-Rock outcrop complex, 45 to 90 percent slopes	4,629	1,594	6,223	0.4
302	Switchback gravelly fine sandy loam, 3 to 30 percent slopes	141	160	301	**
303	Switchback gravelly fine sandy loam, 30 to 60 percent slopes	3,177	728	3,905	0.3
304	Switchback gravelly fine sandy loam, 60 to 90 percent slopes	1,541	---	1,541	0.1
305	Taneum loam, 30 to 60 percent slopes	2,489	---	2,489	0.2
306	Thow cindery fine sandy loam, 8 to 30 percent slopes	188	97	285	**
307	Thow cindery fine sandy loam, 30 to 60 percent slopes	1,768	157	1,925	0.1
308	Thow cindery fine sandy loam, 60 to 90 percent slopes	375	---	375	**
309	Thow-Domkey-Rock outcrop complex, 30 to 60 percent slopes	742	---	742	**
310	Thowson fine sandy loam, 0 to 8 percent slopes	109	---	109	**
311	Thowson fine sandy loam, 8 to 15 percent slopes	200	---	200	**
312	Thowson fine sandy loam, 15 to 30 percent slopes	724	237	961	**
313	Thowson fine sandy loam, 30 to 60 percent slopes	1,553	324	1,877	0.1
314	Thowson stony fine sandy loam, 30 to 60 percent slopes	2,156	---	2,156	0.1
315	Thowson-Rock outcrop complex, 8 to 30 percent slopes	858	---	858	**
316	Thowson-Rock outcrop complex, 30 to 60 percent slopes	2,909	---	2,909	0.2
317	Thowson-Rock outcrop complex, 60 to 90 percent slopes	885	---	885	**
318	Thowson-Rock outcrop association, 30 to 60 percent slopes*	1,050	---	1,050	**
319	Tillicum sandy loam, 30 to 60 percent slopes	2,533	---	2,533	0.2
320	Tillicum fine sandy loam, 8 to 30 percent slopes	1,134	---	1,134	**
321	Tillicum fine sandy loam, 30 to 60 percent slopes	4,575	---	4,575	0.3
322	Tillmont cindery sandy loam, 8 to 30 percent slopes	1,941	---	1,941	0.1
323	Tillmont cindery sandy loam, 30 to 60 percent slopes	5,170	---	5,170	0.3
324	Tillmont-Inkler association, 30 to 60 percent slopes*	160	---	160	**
325	Tiptop very gravelly loam, 30 to 60 percent slopes	2,870	---	2,870	0.2
326	Tiptop-Naxing association, 30 to 60 percent slopes*	250	---	250	**
327	Totem sandy loam, 5 to 30 percent slopes	1,748	---	1,748	0.1
328	Totem sandy loam, 30 to 60 percent slopes	4,211	---	4,211	0.3
329	Totem sandy loam, 60 to 90 percent slopes	699	---	699	**
330	Totem-Chiwaukum association, 30 to 60 percent slopes*	1,570	---	1,570	0.1

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total Area	Total Extent
		Acres	*Acres*	*Acres*	*Pct*
331	Treen fine sandy loam, 45 to 90 percent slopes	590	---	590	**
332	Treen-Klapatche association, 45 to 90 percent slopes*	610	---	610	**
333	Tronsen stony silt loam, 8 to 30 percent slopes	273	---	273	**
334	Tronsen stony silt loam, 30 to 60 percent slopes	337	---	337	**
335	Tyee gravelly loamy coarse sand, 30 to 90 percent slopes	7,821	---	7,821	0.5
336	Tyee gravelly sandy loam, 3 to 30 percent slopes	249	---	249	**
337	Tyee gravelly sandy loam, 30 to 90 percent slopes	2,456	---	2,456	0.2
338	Tyee-Bisping complex, 30 to 60 percent slopes	1,800	---	1,800	0.1
339	Typic Cryaquands, nearly level to gently sloping*	570	---	570	**
340	Vabbing bouldery sandy loam, 3 to 30 percent slopes	567	---	567	**
341	Vabbing bouldery sandy loam, 30 to 60 percent slopes	1,352	---	1,352	**
342	Vabbing-Gilpar association, 30 to 60 percent slopes*	1,180	---	1,180	**
343	Vabbing-Rock outcrop complex, 45 to 90 percent slopes	247	---	247	**
344	Vabus gravelly fine sandy loam, 3 to 30 percent slopes	2,156	---	2,156	0.1
345	Vabus gravelly fine sandy loam, 30 to 60 percent slopes	7,240	---	7,240	0.5
346	Vabus-Chinkmin association, 3 to 30 percent slopes*	1,330	---	1,330	**
347	Vabus-Chinkmin association, 30 to 60 percent slopes*	380	---	380	**
348	Varelum loam, 3 to 8 percent slopes	74	---	74	**
349	Varelum loam, 8 to 15 percent slopes	353	---	353	**
350	Varelum loam, 15 to 30 percent slopes	625	---	625	**
351	Varelum loam, 30 to 60 percent slopes	2,403	---	2,403	0.2
352	Vitricryands, steep and very steep*	964	---	964	**
353	Vitricryands-Rock outcrop complex, steep and very steep*	3,792	---	3,792	0.2
354	Wagberg stony fine sandy loam, 5 to 30 percent slopes	0	176	176	**
355	Wagberg stony fine sandy loam, 30 to 60 percent slopes	0	381	381	**
356	Wagberg complex, 25 to 70 percent slopes	0	204	204	**
357	Wagberg-Swakane-Rock outcrop complex, 45 to 90 percent slopes	0	346	346	**
358	Wedge cindery sandy loam, 8 to 30 percent slopes	365	---	365	**
359	Wedge cindery sandy loam, 30 to 60 percent slopes	3,685	---	3,685	0.2
360	Wedge cindery fine sandy loam, 8 to 30 percent slopes	4,182	---	4,182	0.3
361	Wedge cindery fine sandy loam, 30 to 60 percent slopes	18,410	---	18,410	1.2
362	Wedge-Typic Cryaquands complex, 0 to 15 percent slopes*	768	---	768	**
363	Wedge association, 30 to 60 percent slopes*	2,120	---	2,120	0.1
364	Wedgemont very cindery fine sandy loam, 30 to 60 percent slopes	4,892	---	4,892	0.3

See footnotes at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Chelan County	Okanogan County	Total Area	Total Extent
		Acres	*Acres*	*Acres*	*Pct*
365	Wilma stony fine sandy loam, 30 to 60 percent slopes	3,562	---	3,562	0.2
366	Wilma-Rock outcrop complex, 30 to 60 percent slopes	617	1,567	2,184	0.1
367	Yaxing loam, 8 to 15 percent slopes	40	---	40	**
368	Yaxing loam, 30 to 60 percent slopes	1,600	---	1,600	0.1
369	Yaxon silt loam, 8 to 15 percent slopes	110	---	110	**
370	Yaxon silt loam, 15 to 30 percent slopes	659	---	659	**
371	Yaxon silt loam, 30 to 45 percent slopes	756	---	756	**
372	Yaxon silt loam, 45 to 65 percent slopes	364	---	364	**
373	Yaxon silt loam, 45 to 65 percent north slopes	950	---	950	**
374	Zeb stony sandy loam, 3 to 30 percent slopes	916	---	916	**
W	Water	28,526	5	28,531	1.9
	Total	1,518,551	13,738	1,532,289	100.0

* Broadly defined.

** Less than 0.1 percent.

Table 5.--Land Capability and Yields per Acre of Crops and Pasture

(Yields in the "N" columns are for nonirrigated areas; those in the "I" columns are for irrigated areas. Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
1:								
Aeric Fluvaquents	4w	---	2.00	---	4.00	---	---	---
2:								
Almac	6e	---	---	---	---	---	---	---
3:								
Almac	7e	---	---	---	---	---	---	---
4:								
Almac	7e	---	---	---	---	---	---	---
5:								
Almac	7e	---	---	---	---	---	---	---
Azwell	7e	---	---	---	---	---	---	---
6:								
Almac	7e	---	---	---	---	---	---	---
Azwell	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
7:								
Almac	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
8:								
Alnult	7s	---	---	---	---	---	---	---
Reggad	8s	---	---	---	---	---	---	---
9:								
Altapeak	6e	---	---	---	---	---	---	---
10:								
Altapeak	7e	---	---	---	---	---	---	---
11:								
Altapeak	7e	---	---	---	---	---	---	---
12:								
Altapeak	7e	---	---	---	---	---	---	---
13:								
Altapeak	7e	---	---	---	---	---	---	---
Alnult	7s	---	---	---	---	---	---	---
14:								
Altapeak	7e	---	---	---	---	---	---	---
Alnult	7s	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
15:								
Altapeak----------------	7e	---	---	---	---	---	---	---
Alnult------------------	7s	---	---	---	---	---	---	---
16:								
Anatone-----------------	7e	---	---	---	---	---	---	---
Blewett-----------------	7s	---	---	---	---	---	---	---
17:								
Anatone-----------------	7e	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
18:								
Andic Cryochrepts-------	7s	---	---	---	---	---	---	---
19:								
Andic Cryumbrepts-------	7s	---	---	---	---	---	---	---
20:								
Andic Cryumbrepts-------	7s	---	---	---	---	---	---	---
21:								
Andic Cryumbrepts-------	7s	---	---	---	---	---	---	---
Haplocryods-------------	7s	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
22:								
Andic Cryumbrepts-------	7s	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
23:								
Andic Cryumbrepts-------	7e	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
24:								
Andic Haplumbrepts------	7s	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
25:								
Angle-------------------	7s	---	---	---	---	---	---	---
26:								
Aquic Cryumprepts-------	6w	---	---	---	---	---	---	---
27:								
Ardening----------------	7s	---	---	---	---	---	---	---
28:								
Ardenmont---------------	4e	---	---	---	---	---	---	---
29:								
Ardenmont---------------	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
30:								
Ardenmont	7e	---	---	---	---	---	---	---
31:								
Ardenmont	7e	---	---	---	---	---	---	---
Swakane	7s	---	---	---	---	---	---	---
32:								
Ardenvoir	7s	---	---	---	---	---	---	---
33:								
Ardenvoir	7s	---	---	---	---	---	---	---
34:								
Azwell	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
35:								
Bagmont	7e	---	---	---	---	---	---	---
36:								
Bigcreek	4e	---	---	---	---	---	---	---
37:								
Billyridge	2e	2e	1.50	6.00	1.50	12.00	45.00	70.00
38:								
Billyridge	3e	4e	1.50	6.00	1.50	12.00	45.00	70.00
39:								
Billyridge	4e	6e	1.50	6.00	1.50	12.00	45.00	---
40:								
Bisping	3e	---	---	---	1.50	---	30.00	---
41:								
Bisping	4e	---	---	---	1.50	---	25.00	---
42:								
Bisping	7e	---	---	---	---	---	---	---
43:								
Bjork	7e	---	---	---	---	---	---	---
44:								
Bjork	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
45:								
Blag	7e	---	---	---	---	---	---	---
Cle Elum	7e	---	---	---	1.00	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
46:								
Blag	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
47:								
Blewett-----------------	7s	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
48:								
Borland-----------------	7e	---	---	---	---	---	---	---
49:								
Borland-----------------	7e	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
50:								
Brief-------------------	4e	3e	1.50	7.00	---	---	---	---
51:								
Brisky------------------	7s	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
52:								
Burch-------------------	3e	2e	---	7.00	---	---	---	---
53:								
Burnscreek--------------	6s	6e	1.50	4.00	2.00	10.00	---	---
54:								
Burrant-----------------	2e	3e	---	5.00	---	12.00	---	---
55:								
Burrant-----------------	4e	---	---	---	---	---	---	---
56:								
Cashmont----------------	4e	2e	---	7.00	---	---	18.00	130.00
57:								
Cashmont----------------	4e	6e	---	7.00	---	---	18.00	130.00
58:								
Chapot------------------	7s	---	---	---	---	---	---	---
59:								
Chinkmin----------------	6e	---	---	---	---	---	---	---
60:								
Chinkmin----------------	7e	---	---	---	---	---	---	---
61:								
Chinkmin----------------	6e	---	---	---	---	---	---	---
Altapeak----------------	6e	---	---	---	---	---	---	---
62:								
Chinkmin----------------	7e	---	---	---	---	---	---	---
Altapeak----------------	7e	---	---	---	---	---	---	---
63:								
Chiwaukum---------------	6s	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
64:								
Chiwaukum	7s	---	---	---	---	---	---	---
65:								
Chiwaukum	6s	---	---	---	---	---	---	---
66:								
Chiwaukum	6s	---	---	---	---	---	---	---
67:								
Chiwaukum	6s	---	---	---	---	---	---	---
Chiwaukum, south	6s	---	---	---	---	---	---	---
68:								
Chiwaukum	7s	---	---	---	---	---	---	---
Chiwaukum, south	7s	---	---	---	---	---	---	---
69:								
Chiwawa	3e	3e	2.00	5.00	3.50	8.50	---	---
70:								
Choralmont, till substratum	7e	---	---	---	---	---	---	---
Choralmont	7e	---	---	---	---	---	---	---
71:								
Choralmont	4e	---	4.00	---	7.00	---	60.00	---
72:								
Choralmont	7e	---	---	---	---	---	---	---
73:								
Choralmont	4e	---	4.00	---	7.00	---	60.00	---
74:								
Choralmont	7e	---	---	---	---	---	---	---
75:								
Choralmont	7e	---	---	---	---	---	---	---
Limking	7s	---	---	---	---	---	---	---
76:								
Chumstick	6s	---	---	---	---	---	---	---
77:								
Chumstick	7s	---	---	---	---	---	---	---
78:								
Chumstick	7s	---	---	---	---	---	---	---
79:								
Cle Elum	7e	---	---	---	1.00	---	---	---
80:								
Cle Elum	7e	---	---	---	1.00	---	---	---
81:								
Coopmont	6e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
82:								
Coopmont	7e	---	---	---	---	---	---	---
83:								
Cowiche	3e	4e	1.00	7.00	2.00	10.00	35.00	70.00
Cowiche, very deep	3e	4e	1.50	7.00	2.00	12.00	18.00	120.00
84:								
Cowiche	7e	---	---	---	---	---	---	---
Cowiche, very deep	7e	---	---	---	---	---	---	---
85:								
Cryomont	6s	---	---	---	---	---	---	---
86:								
Cryomont	6s	---	---	---	---	---	---	---
87:								
Cryomont	6s	---	---	---	---	---	---	---
Cryomont, fan	6s	---	---	---	---	---	---	---
88:								
Culving	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
89:								
Culvop	7e	---	---	---	---	---	---	---
90:								
Devore	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
91:								
Dinkelman	7e	---	---	---	---	---	---	---
92:								
Dinkelman	7e	---	---	---	---	---	---	---
93:								
Dinkelman	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
94:								
Dinkels	4e	---	---	---	---	---	18.00	---
95:								
Dinkels	4e	---	---	---	---	---	18.00	---
96:								
Dinkels	7e	---	---	---	---	---	---	---
97:								
Domkey	4e	---	---	---	---	---	---	---
98:								
Domkey	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
99:								
Domkey	7e	---	---	---	---	---	---	---
McCree	7s	---	---	---	---	---	---	---
100:								
Dragoon	7e	---	---	---	---	---	---	---
101:								
Dragoon	7e	---	---	---	---	---	---	---
102:								
Entiat	7e	---	---	---	---	---	---	---
103:								
Entiat	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
104:								
Entic Haplumbrepts	7s	---	---	---	---	---	---	---
105:								
Esmeralda	7s	---	---	---	---	---	---	---
106:								
Esmeralda	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
107:								
Fears	7s	---	---	---	---	---	---	---
108:								
Fears	7s	---	---	---	---	---	---	---
Devore	7s	---	---	---	---	---	---	---
109:								
Fernow	6e	---	---	---	---	---	---	---
110:								
Fernow	7e	---	---	---	---	---	---	---
111:								
Fernow	7e	---	---	---	---	---	---	---
Serene	7e	---	---	---	---	---	---	---
112:								
Fluvaquents	7w	---	---	---	1.50	---	---	---
113:								
Georgecreek	3e	4e	1.00	4.00	2.00	7.00	45.00	60.00
114:								
Georgecreek	4e	6e	1.00	3.50	1.50	6.00	40.00	---
115:								
Georgecreek	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
116:								
Georgecreek	3e	4e	1.00	4.00	2.00	7.00	45.00	60.00
Dragoon	3e	---	2.00	---	5.00	---	40.00	---
117:								
Georgecreek	4e	6e	1.00	3.50	1.50	6.00	40.00	---
Dragoon	4e	---	1.50	---	3.50	---	40.00	---
118:								
Gilpar	7s	---	---	---	---	---	---	---
119:								
Gilpar	7s	---	---	---	---	---	---	---
Nimue	7e	---	---	---	---	---	---	---
120:								
Gilpar	7s	---	---	---	---	---	---	---
Nimue	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
121:								
Gilpar	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
122:								
Glaciers, snowfields	8w	---	---	---	---	---	---	---
123:								
Goffpeak	7e	---	---	---	---	---	---	---
124:								
Goffpeak	7e	---	---	---	---	---	---	---
Fears	7s	---	---	---	---	---	---	---
125:								
Haplocryods, cold	6e	---	---	---	---	---	---	---
Haplocryods, stony	7s	---	---	---	---	---	---	---
126:								
Haplocryods	7e	---	---	---	---	---	---	---
Andic Cryochrepts	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
127:								
Haploxerolls	6s	---	---	---	---	---	---	---
128:								
Haploxerolls	7s	---	---	---	---	---	---	---
129:								
Humicryods	6s	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
129:								
Andic Cryumbrepts-------	6s	---	---	---	---	---	---	---
130:								
Humicryods--------------	7s	---	---	---	---	---	---	---
Andic Cryochrepts-------	7s	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
131:								
Humicryods--------------	7s	---	---	---	---	---	---	---
Andic Cryumbrepts-------	7e	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
132:								
Hyprairie---------------	6e	---	1.50	---	4.00	---	---	---
133:								
Hyprairie---------------	7e	---	---	---	---	---	---	---
134:								
Hyprairie---------------	7e	---	---	---	---	---	---	---
Oldbutte----------------	7e	---	---	---	---	---	---	---
135:								
Icicle, south-----------	7s	---	---	---	---	---	---	---
Icicle------------------	7s	---	---	---	---	---	---	---
136:								
Icicle------------------	7s	---	---	---	---	---	---	---
137:								
Icicle------------------	7s	---	---	---	---	---	---	---
138:								
Icicle------------------	7s	---	---	---	---	---	---	---
139:								
Icicle------------------	7s	---	---	---	---	---	---	---
140:								
Icicle------------------	7s	---	---	---	---	---	---	---
Chumstick---------------	7s	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
141:								
Icicle------------------	7s	---	---	---	---	---	---	---
Chumstick---------------	7s	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
142:								
Inkler------------------	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
143:								
Isella	7e	---	---	---	---	---	---	---
Fernow	6e	---	---	---	---	---	---	---
144:								
Isella	7e	---	---	---	---	---	---	---
Fernow	7e	---	---	---	---	---	---	---
145:								
Isella	6e	---	---	---	---	---	---	---
Nimue	6e	---	---	---	---	---	---	---
146:								
Isella	7e	---	---	---	---	---	---	---
Nimue	7s	---	---	---	---	---	---	---
147:								
Kingmont	7e	---	---	---	---	---	---	---
148:								
Kladnick	6s	---	---	---	---	---	---	---
149:								
Kladnick	6e	---	---	---	---	---	---	---
150:								
Kladnick	6s	---	---	---	---	---	---	---
151:								
Klapatche	7s	---	---	---	---	---	---	---
Altapeak	7e	---	---	---	---	---	---	---
152:								
Kloochman	4e	---	---	---	---	---	---	---
153:								
Kloochman	7e	---	---	---	---	---	---	---
154:								
Kloochman	7e	---	---	---	---	---	---	---
155:								
Kloochman	7e	---	---	---	---	---	---	---
Inkler	7e	---	---	---	---	---	---	---
156:								
Kloochman	7e	---	---	---	---	---	---	---
Inkler	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
157:								
Kloochman	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
158:								
Limking------------------	7s	---	---	---	---	---	---	---
159:								
Limking------------------	7s	---	---	---	---	---	---	---
Coopmont-----------------	7e	---	---	---	---	---	---	---
160:								
Limking------------------	7s	---	---	---	---	---	---	---
Coopmont-----------------	7e	---	---	---	---	---	---	---
161:								
Limking------------------	7s	---	---	---	---	---	---	---
Coopmont-----------------	7e	---	---	---	---	---	---	---
Rock outcrop-------------	8s	---	---	---	---	---	---	---
162:								
Limking------------------	7s	---	---	---	---	---	---	---
Rock outcrop-------------	8s	---	---	---	---	---	---	---
163:								
Line---------------------	6e	---	---	---	---	---	---	---
164:								
Line---------------------	6e	---	---	---	---	---	---	---
165:								
Line---------------------	7s	---	---	---	---	---	---	---
166:								
Line---------------------	6e	---	---	---	---	---	---	---
Vabbing------------------	6s	---	---	---	---	---	---	---
167:								
Loneridge----------------	6s	---	---	---	---	---	---	---
168:								
Loneridge----------------	6s	---	---	---	---	---	---	---
169:								
Loneridge----------------	6e	---	---	---	---	---	---	---
170:								
Macreeing----------------	7s	---	---	---	---	---	---	---
171:								
Macreeing----------------	7s	---	---	---	---	---	---	---
172:								
Macreeing----------------	7s	---	---	---	---	---	---	---
Rock outcrop-------------	8s	---	---	---	---	---	---	---
173:								
Mansonia-----------------	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
174:								
Mansonia	4e	7e	---	7.00	---	25.00	---	---
Swakane	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
175:								
Mansonia	7e	---	---	---	10.00	---	---	---
Swakane	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
176:								
Marmont	6e	4e	1.50	4.00	1.50	15.00	---	---
177:								
Marmont	6e	6e	1.50	4.00	1.50	15.00	---	---
178:								
Marmont	7e	---	---	---	---	---	---	---
179:								
McCree	6s	---	---	---	---	---	---	---
180:								
McCree	7s	---	---	---	---	---	---	---
181:								
McCree	7s	---	---	---	---	---	---	---
182:								
McCree	7s	---	---	---	---	---	---	---
Palmich	7e	---	---	---	---	---	---	---
183:								
McCree	7s	---	---	---	---	---	---	---
Palmont	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
184:								
McCree	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
185:								
Mippon	6w	4w	---	3.00	---	---	---	---
186:								
Mippon	6w	---	---	---	---	---	---	---
187:								
Mippon	6w	---	---	---	---	---	---	---
188:								
Morical	3e	4e	2.00	4.50	8.00	---	35.00	80.00

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
189:								
Morical	4e	6e	2.00	4.00	4.00	7.00	30.00	80.00
190:								
Morical	7e	---	---	---	---	---	---	---
191:								
Morical	7e	---	---	---	---	---	---	---
Dragoon	7e	---	---	---	---	---	---	---
192:								
Morical	4e	6e	2.00	4.00	4.00	7.00	30.00	80.00
Dragoon	4e	---	1.50	---	3.50	---	40.00	---
193:								
Morical	7e	---	---	---	---	---	---	---
Dragoon	7e	---	---	---	---	---	---	---
194:								
Morical	7e	---	---	---	---	---	---	---
Dragoon	7e	---	---	---	---	---	---	---
195:								
Mountaineer	7s	---	---	---	---	---	---	---
196:								
Mountaineer	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
197:								
Mountaineer	7s	---	---	---	---	---	---	---
Tillicum	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
198:								
Nahahum	7e	---	---	---	---	---	---	---
199:								
Nahahum	7e	---	---	---	---	---	---	---
Taneum	7e	---	---	---	---	---	---	---
200:								
Nard	4e	6e	1.50	4.00	2.00	---	---	---
201:								
Nard	7e	---	---	---	---	---	---	---
202:								
Nard	7e	---	---	---	---	---	---	---
Blag	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
203:								
Nard	7e	---	---	---	---	---	---	---
Brisky	7s	---	---	---	---	---	---	---
204:								
Nardine	3e	---	4.00	---	10.00	---	---	---
205:								
Nardmont	4e	---	---	---	---	---	---	---
206:								
Nardmont	7e	---	---	---	---	---	---	---
207:								
Natapoc	6s	---	---	---	---	---	---	---
208:								
Natapoc	7e	---	---	---	---	---	---	---
209:								
Natapoc	7e	---	---	---	---	---	---	---
Thow	7e	---	---	---	---	---	---	---
210:								
Naxing	6s	---	---	---	---	---	---	---
211:								
Naxing	7s	---	---	---	---	---	---	---
212:								
Newbell	7s	---	---	---	---	---	---	---
213:								
Nimue	7s	---	---	---	---	---	---	---
214:								
Nimue	7e	---	---	---	---	---	---	---
215:								
Nimue	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
216:								
Nimue	7e	---	---	---	---	---	---	---
Nimue, dry	7s	---	---	---	---	---	---	---
217:								
Nimue, dry	7s	---	---	---	---	---	---	---
Nimue	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
218:								
Oldbutte	3e	---	5.00	---	9.00	---	---	---
219:								
Oldbutte	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
220:								
Palmich	4e	---	---	---	---	---	---	---
221:								
Palmich	7e	---	---	---	---	---	---	---
222:								
Palmich	7e	---	---	---	---	---	---	---
223:								
Palmich	7e	---	---	---	---	---	---	---
McCree	7s	---	---	---	---	---	---	---
224:								
Palmich	7e	---	---	---	---	---	---	---
McCree	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
225:								
Palmich	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
226:								
Palmont	7e	---	---	---	---	---	---	---
227:								
Palmont	7e	---	---	---	---	---	---	---
228:								
Palmont	7s	---	---	---	---	---	---	---
229:								
Palmont	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
230:								
Ramparter	7e	---	---	---	---	---	---	---
231:								
Ramparter	7s	---	---	---	---	---	---	---
232:								
Ramparter	7e	---	---	---	---	---	---	---
233:								
Ramparter	7e	---	---	---	---	---	---	---
234:								
Ramparter	4e	---	---	---	---	---	---	---
235:								
Ramparter	7e	---	---	---	---	---	---	---
236:								
Ramparter	7e	---	---	---	---	---	---	---
Wilma	7s	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
237:								
Reggad	8s	---	---	---	---	---	---	---
238:								
Reggad	8s	---	---	---	---	---	---	---
Serene	7e	---	---	---	---	---	---	---
239:								
Rock outcrop	8s	---	---	---	---	---	---	---
240:								
Rock outcrop	8s	---	---	---	---	---	---	---
Blewett	7s	---	---	---	---	---	---	---
241:								
Rock outcrop	8s	---	---	---	---	---	---	---
Borland	7e	---	---	---	---	---	---	---
242:								
Rock outcrop	8s	---	---	---	---	---	---	---
Chumstick	7s	---	---	---	---	---	---	---
Icicle	7s	---	---	---	---	---	---	---
243:								
Rock outcrop	8s	---	---	---	---	---	---	---
Chumstick	7s	---	---	---	---	---	---	---
Icicle	7s	---	---	---	---	---	---	---
244:								
Rock outcrop	8	---	---	---	---	---	---	---
Rubble land	8	---	---	---	---	---	---	---
Glaciers, snowfields	8	---	---	---	---	---	---	---
245:								
Rock outcrop	8s	---	---	---	---	---	---	---
Rubble land	8s	---	---	---	---	---	---	---
Serene	7e	---	---	---	---	---	---	---
246:								
Rubble land	8s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
247:								
Safety	6e	---	---	---	---	---	---	---
248:								
Safety	7s	---	---	---	---	---	---	---
249:								
Safety	7s	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
250:								
Safety	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
251:								
Saska	6s	---	---	---	---	---	---	---
252:								
Saska	7s	---	---	---	---	---	---	---
253:								
Saska	6s	---	---	---	---	---	---	---
254:								
Saska	7s	---	---	---	---	---	---	---
255:								
Saska	6s	---	---	---	---	---	---	---
256:								
Saska	7s	---	---	---	---	---	---	---
257:								
Saska	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
258:								
Saska	6s	---	---	---	---	---	---	---
Saska, bouldery	6s	---	---	---	---	---	---	---
259:								
Saska, south	6s	---	---	---	---	---	---	---
Saska	6s	---	---	---	---	---	---	---
260:								
Saska	7s	---	---	---	---	---	---	---
Saska, bouldery	7s	---	---	---	---	---	---	---
261:								
Saska	7s	---	---	---	---	---	---	---
Saska, bouldery	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
262:								
Saska, south	7s	---	---	---	---	---	---	---
Saska	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
263:								
Saydab	6s	---	---	---	---	---	---	---
264:								
Scotties	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
265:								
Serene	7e	---	---	---	---	---	---	---
266:								
Serene	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
267:								
Serpen	4e	---	---	---	---	---	---	---
268:								
Serpen	7e	---	---	---	---	---	---	---
269:								
Shadypass	7e	---	---	---	---	---	---	---
270:								
Shamel	7e	---	---	---	---	---	---	---
271:								
Shamel	7e	---	---	---	---	---	---	---
272:								
Shamel	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
273:								
Shaser	7e	---	---	---	---	---	---	---
Blewett	7s	---	---	---	---	---	---	---
274:								
Shaser	7e	---	---	---	---	---	---	---
Brisky	7s	---	---	---	---	---	---	---
275:								
Shaser	7e	---	---	---	---	---	---	---
Chapot	7e	---	---	---	---	---	---	---
276:								
Skipeak	6e	---	---	---	---	---	---	---
277:								
Skipeak	6e	---	---	---	---	---	---	---
Line	6e	---	---	---	---	---	---	---
278:								
Soda	6s	---	---	---	---	---	---	---
279:								
Soda	7s	---	---	---	---	---	---	---
280:								
Soda	7s	---	---	---	---	---	---	---
281:								
Soda	6s	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
282:								
Soda	7s	---	---	---	---	---	---	---
283:								
Soda	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
284:								
Soda	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
285:								
Soda	6s	---	---	---	---	---	---	---
Soda, cold	6s	---	---	---	---	---	---	---
286:								
Soda	7s	---	---	---	---	---	---	---
Soda, cold	7s	---	---	---	---	---	---	---
287:								
Soda	7s	---	---	---	---	---	---	---
Soda, cold	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
288:								
Sodacreek	6s	---	---	---	---	---	---	---
289:								
Sodacreek	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
290:								
Spodic Vitrixerands	6e	---	---	---	---	---	---	---
Saska	6s	---	---	---	---	---	---	---
291:								
Spodic Vitrixerands	7e	---	---	---	---	---	---	---
Saska	6s	---	---	---	---	---	---	---
292:								
Stemilt	6s	---	---	---	---	---	---	---
293:								
Stemilt	7s	---	---	---	---	---	---	---
294:								
Surgh	6e	---	---	---	---	---	---	---
295:								
Surgh	7e	---	---	---	---	---	---	---
296:								
Surgh	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
297:								
Surgh	6s	---	---	---	---	---	---	---
Wedge	6e	---	---	---	---	---	---	---
298:								
Swakane	7s	---	---	---	---	---	---	---
299:								
Swakane	7s	---	---	---	---	---	---	---
300:								
Swakane	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
301:								
Swakane	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
302:								
Switchback	4e	---	---	---	---	---	---	---
303:								
Switchback	7e	---	---	---	---	---	---	---
304:								
Switchback	7e	---	---	---	---	---	---	---
305:								
Taneum	7e	---	---	---	---	---	---	---
306:								
Thow	4e	---	---	---	1.00	---	---	---
307:								
Thow	7e	---	---	---	---	---	---	---
308:								
Thow	7e	---	---	---	---	---	---	---
309:								
Thow	7e	---	---	---	---	---	---	---
Domkey	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
310:								
Thowson	2e	3e	1.00	6.00	1.50	10.00	---	---
311:								
Thowson	3e	4e	1.00	6.00	1.50	10.00	---	---
312:								
Thowson	4e	6e	1.00	6.00	1.50	10.00	---	---
313:								
Thowson	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability N	Land capability I	Grass-legume hay N	Grass-legume hay I	Pasture N	Pasture I	Winter wheat N	Winter wheat I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
314:								
Thowson	7s	---	---	---	---	---	---	---
315:								
Thowson	6s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
316:								
Thowson	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
317:								
Thowson	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
318:								
Thowson, stony	7s	---	---	---	---	---	---	---
Thowson	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
319:								
Tillicum	7e	---	---	---	---	---	---	---
320:								
Tillicum	4e	---	---	---	---	---	---	---
321:								
Tillicum	7e	---	---	---	---	---	---	---
322:								
Tillmont	4e	---	---	---	---	---	---	---
323:								
Tillmont	7e	---	---	---	---	---	---	---
324:								
Tillmont	7e	---	---	---	---	---	---	---
Inkler	7e	---	---	---	---	---	---	---
325:								
Tiptop	7e	---	---	---	---	---	---	---
326:								
Tiptop	7e	---	---	---	---	---	---	---
Naxing	7s	---	---	---	---	---	---	---
327:								
Totem	6s	---	---	---	---	---	---	---
328:								
Totem	7e	---	---	---	---	---	---	---
329:								
Totem	7e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
330:								
Totem	7e	---	---	---	---	---	---	---
Chiwaukum	7s	---	---	---	---	---	---	---
331:								
Treen	7e	---	---	---	---	---	---	---
332:								
Treen	7e	---	---	---	---	---	---	---
Klapatche	7s	---	---	---	---	---	---	---
333:								
Tronsen	6s	---	---	---	---	---	---	---
334:								
Tronsen	7s	---	---	---	---	---	---	---
335:								
Tyee	7e	---	---	---	---	---	---	---
336:								
Tyee	6e	---	---	---	---	---	---	---
337:								
Tyee	7e	---	---	---	---	---	---	---
338:								
Tyee	7e	---	---	---	---	---	---	---
Bisping	7e	---	---	---	---	---	---	---
339:								
Typic Cryaquands	6w	---	---	---	---	---	---	---
340:								
Vabbing	6s	---	---	---	---	---	---	---
341:								
Vabbing	7s	---	---	---	---	---	---	---
342:								
Vabbing	7s	---	---	---	---	---	---	---
Gilpar	7s	---	---	---	---	---	---	---
343:								
Vabbing	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
344:								
Vabus	6e	---	---	---	---	---	---	---
345:								
Vabus	7e	---	---	---	---	---	---	---
346:								
Vabus	6e	---	---	---	---	---	---	---
Chinkmin	6e	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
347:								
Vabus	7e	---	---	---	---	---	---	---
Chinkmin	7e	---	---	---	---	---	---	---
348:								
Varelum	2e	3e	1.50	7.00	2.00	12.00	---	---
349:								
Varelum	3e	4e	1.50	7.00	2.00	12.00	---	---
350:								
Varelum	4e	6e	1.50	7.00	2.00	12.00	---	---
351:								
Varelum	7e	---	---	---	---	---	---	---
352:								
Vitricryands	7e	---	---	---	---	---	---	---
353:								
Vitricryands	7e	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
354:								
Wagberg	6s	---	---	---	---	---	---	---
355:								
Wagberg	7s	---	---	---	---	---	---	---
356:								
Wagberg	7s	---	---	---	---	---	---	---
Wagberg, south	7s	---	---	---	---	---	---	---
357:								
Wagberg	7s	---	---	---	---	---	---	---
Swakane	7s	---	---	---	---	---	---	---
Rock outcrop	8s	---	---	---	---	---	---	---
358:								
Wedge	6e	---	---	---	---	---	---	---
359:								
Wedge	7e	---	---	---	---	---	---	---
360:								
Wedge	6e	---	---	---	---	---	---	---
361:								
Wedge	7e	---	---	---	---	---	---	---
362:								
Wedge	6e	---	---	---	---	---	---	---
Typic Cryaquands	6w	---	---	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Grass-legume hay		Pasture		Winter wheat	
	N	I	N	I	N	I	N	I
			Tons	*Tons*	*AUM*	*AUM*	*Bu*	*Bu*
363:								
Wedge-------------------	7e	---	---	---	---	---	---	---
Wedge, cold-------------	7e	---	---	---	---	---	---	---
364:								
Wedgemont---------------	7e	---	---	---	---	---	---	---
365:								
Wilma-------------------	7s	---	---	---	---	---	---	---
366:								
Wilma-------------------	7s	---	---	---	---	---	---	---
Rock outcrop------------	8s	---	---	---	---	---	---	---
367:								
Yaxing------------------	3e	4e	---	7.00	---	12.00	---	---
368:								
Yaxing------------------	7e	---	---	---	---	---	---	---
369:								
Yaxon-------------------	3e	4e	1.50	6.00	2.00	12.00	15.00	80.00
370:								
Yaxon-------------------	4e	6e	1.50	5.00	2.00	12.00	15.00	---
371:								
Yaxon-------------------	6e	---	1.50	---	2.00	---	---	---
372:								
Yaxon-------------------	7e	---	---	---	---	---	---	---
373:								
Yaxon-------------------	7e	---	---	---	---	---	---	---
374:								
Zeb---------------------	6s	6e	---	---	2.00	10.00	---	---
W:								
Water-------------------	---	---	---	---	---	---	---	---

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities

(Composition of range ecological sites based on percent weight. Composition of forest plant associations understory based on percent canopy cover. Absence of an entry indicates that data were not available)

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
1:						
Aeric						
Fluvaquents----	Grand fir/vine maple/queencup beadlily (CWS553)	Favorable	---	Hairy brackenfern	15	
		Normal	---	Redosier dogwood	15	
		Unfavorable	---	Cascade Oregongrape	10	
				Creambush oceanspray	10	
				Pacific trillium	5	
				Rocky Mountain maple	5	
				Bigleaf maple	5	
				Common snowberry	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
2:						
Almac-----------	Subalpine fir/pachistima/pinegrass (CES112)	Favorable	---	Grouse blueberry	40	
		Normal	---	Myrtle pachistima	25	
		Unfavorable	---	Lupine	20	
				Elk sedge	5	
				Pinegrass	5	
				Aster	1	
				Polemonium	1	
				Prince's pine	1	
				Sidebells shinleaf	1	
				Whiteveined shinleaf	1	
3:						
Almac-----------	Subalpine fir/pachistima/pinegrass (CES112)	Favorable	---	Grouse blueberry	40	
		Normal	---	Myrtle pachistima	25	
		Unfavorable	---	Lupine	20	
				Elk sedge	5	
				Pinegrass	5	
				Aster	1	
				Polemonium	1	
				Prince's pine	1	
				Sidebells shinleaf	1	
				Whiteveined shinleaf	1	
4:						
Almac-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Evergreen huckleberry	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Pyrola	5	
				Western teaberry	5	
				White spirea	5	
				Broadleaf starflower	1	
				Western swordfern	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
5:						
Almac-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Evergreen huckleberry	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Pyrola	5	
				Western teaberry	5	
				White spirea	5	
				Broadleaf starflower	1	
				Western swordfern	1	
Azwell----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	35	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Elk sedge	10	
				Lupine	5	
				Prince's pine	5	
				Pyrola	5	
				Western yarrow	5	
				Willow	2	
6:						
Almac-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Evergreen huckleberry	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Pyrola	5	
				Western teaberry	5	
				White spirea	5	
				Broadleaf starflower	1	
				Western swordfern	1	
Azwell----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	35	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Elk sedge	10	
				Lupine	5	
				Prince's pine	5	
				Pyrola	5	
				Western yarrow	5	
				Willow	2	
Rock outcrop.						
7:						
Almac-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Evergreen huckleberry	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Pyrola	5	
				Western teaberry	5	
				White spirea	5	
				Broadleaf starflower	1	
				Western swordfern	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
7:						
Rock outcrop.						
8:						
Alnult----------	---	Favorable	---	Sitka spruce	15	
		Normal	---	Rocky Mountain maple	10	
		Unfavorable	---	Myrtle pachistima	5	
				Huckleberry	5	
				Thimbleberry	5	
				Western yarrow	5	
				Serviceberry	5	
Reggad----------	---	Favorable	---	Sitka alder	30	
		Normal	---	Vine maple	25	
		Unfavorable	---	Oval-leaf blueberry	10	
				Devilsclub	5	
				Western swordfern	5	
9:						
Altapeak--------	Mountain hemlock/rusty menziesia-Alaska huckleberry (CMS256)	Favorable	---	Oval-leaf blueberry	25	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Trailing blackberry	5	
10:						
Altapeak--------	Mountain hemlock/rusty menziesia-Alaska huckleberry (CMS256)	Favorable	---	Oval-leaf blueberry	25	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Trailing blackberry	5	
11:						
Altapeak--------	Mountain hemlock/rusty menziesia-Alaska huckleberry (CMS256)	Favorable	---	Oval-leaf blueberry	25	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Trailing blackberry	5	
12:						
Altapeak--------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	25	
		Normal	---	Oval-leaf blueberry	25	
		Unfavorable	---	Rusty menziesia	15	
				Myrtle pachistima	10	
				Hairy brackenfern	5	
				Western teaberry	5	
				Bunchberry dogwood	3	
				Prince's pine	3	
13:						
Altapeak--------	Mountain hemlock/rusty menziesia-Alaska huckleberry (CMS256)	Favorable	---	Oval-leaf blueberry	25	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Trailing blackberry	5	
Alnult----------	---	Favorable	---	Sitka spruce	15	
		Normal	---	Rocky Mountain maple	10	
		Unfavorable	---	Myrtle pachistima	5	
				Huckleberry	5	
				Thimbleberry	5	
				Western yarrow	5	
				Serviceberry	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
14:						
Altapeak--------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	25	
		Normal	---	Oval-leaf blueberry	25	
		Unfavorable	---	Rusty menziesia	15	
				Myrtle pachistima	10	
				Hairy brackenfern	5	
				Western teaberry	5	
				Bunchberry dogwood	3	
				Prince's pine	3	
Alnult----------	---	Favorable	---	Sitka spruce	15	
		Normal	---	Rocky Mountain maple	10	
		Unfavorable	---	Myrtle pachistima	5	
				Huckleberry	5	
				Thimbleberry	5	
				Western yarrow	5	
				Serviceberry	5	
15:						
Altapeak--------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	25	
		Normal	---	Oval-leaf blueberry	25	
		Unfavorable	---	Rusty menziesia	15	
				Myrtle pachistima	10	
				Hairy brackenfern	5	
				Western teaberry	5	
				Bunchberry dogwood	3	
				Prince's pine	3	
Alnult----------	---	Favorable	---	Sitka spruce	15	
		Normal	---	Rocky Mountain maple	10	
		Unfavorable	---	Myrtle pachistima	5	
				Huckleberry	5	
				Thimbleberry	5	
				Western yarrow	5	
				Serviceberry	5	
16:						
Anatone---------	Dry Stony 15+ PZ (R006XY201WA)	Favorable	1,100	Bluebunch wheatgrass		20
		Normal	800	Idaho fescue		19
		Unfavorable	500	Sandberg bluegrass		13
				Carey's balsamroot		9
				Bottlebrush squirreltail		9
				Hood's phlox		8
				Buckwheat		6
				Common yarrow		6
				Longleaf phlox		5
				Phacelia		3
				Slenderbush eriogonum		2
				Threetip sagebrush		2
Blewett---------	Grand fir/pinegrass (CWG124)	Favorable	---	Elk sedge	25	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Bluebunch wheatgrass	10	
				White spirea	10	
				Arrowleaf balsamroot	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other perennial grasses	5	
				Other shrubs	5	
				Pinegrass	5	
				Rose	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
17:						
Anatone---------	Dry Stony 15+ PZ (R006XY201WA)	Favorable	1,100	Bluebunch wheatgrass		20
		Normal	800	Idaho fescue		19
		Unfavorable	500	Sandberg bluegrass		13
				Carey's balsamroot		9
				Bottlebrush squirreltail		9
				Hood's phlox		8
				Buckwheat		6
				Common yarrow		6
				Longleaf phlox		5
				Phacelia		3
				Slenderbush eriogonum		2
				Threetip sagebrush		2
Rock outcrop.						
18:						
Andic Cryochrepts----	---	Favorable	---	Indian paintbrush	5	
		Normal	---	Elk sedge	5	
		Unfavorable	---	Pinegrass	5	
				Polemonium	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Western yarrow	5	
19:						
Andic Cryumbrepts----	Subalpine Park (R006XY704WA)	Favorable	1,100	Greenleaf fescue		20
		Normal	900	Biscuitroot		10
		Unfavorable	700	Elk sedge		10
				American bistort		5
				Indian paintbrush		5
				Aster		5
				Common yarrow		5
				Houndstongue hawkweed		5
				Longleaf hawksbeard		5
				Lupine		5
				Pinegrass		5
				Rosy pussytoes		5
				Spike trisetum		5
20:						
Andic Cryumbrepts----	Subalpine Park (R006XY704WA)	Favorable	1,100	Greenleaf fescue		40
		Normal	900	Hawkweed		25
		Unfavorable	700	Biscuitroot		10
				Indian paintbrush		5
				Currant		5
				Other perennial forbs		5
				Pinegrass		5
				Western yarrow		5

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
21:						
Andic						
Cryumbrepts----	Subalpine Park (R006XY704WA)	Favorable	1,100	Greenleaf fescue		40
		Normal	900	Hawkweed		25
		Unfavorable	700	Biscuitroot		10
				Indian paintbrush		5
				Currant		5
				Other perennial forbs		5
				Pinegrass		5
				Western yarrow		5
Haplocryods-----	Whitebark pine/pinegrass (CAG112)	Favorable	---	Indian paintbrush	5	
		Normal	---	Blue huckleberry	5	
		Unfavorable	---	Elk sedge	5	
				Heartleaf arnica	5	
				Pinegrass	5	
				Polemonium	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
				Western yarrow	5	
Rock outcrop.						
22:						
Andic						
Cryumbrepts----	Subalpine Park (R006XY704WA)	Favorable	1,100	Greenleaf fescue		40
		Normal	900	Hawkweed		25
		Unfavorable	700	Biscuitroot		10
				Indian paintbrush		5
				Currant		5
				Other perennial forbs		5
				Pinegrass		5
				Western yarrow		5
Rock outcrop.						
23:						
Andic						
Cryumbrepts----	Subalpine Park (R006XY704WA)	Favorable	1,100	Dwarf huckleberry		15
		Normal	900	Greenleaf fescue		10
		Unfavorable	700	Mountain snowberry		10
				Pinegrass		10
				Myrtle pachistima		5
				Tall Oregongrape		5
				Vine maple		5
Rock outcrop.						
24:						
Andic						
Haplumbrepts---	Mountain hemlock/rusty menziesia-Alaska huckleberry (CMS256)	Favorable	---	Vine maple	25	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Tall Oregongrape	10	
				Rocky Mountain maple	5	
				Saskatoon serviceberry	5	
				Common snowberry	5	
				Kinnikinnick	5	
				Oceanspray	5	
				Pinegrass	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
25:						
Angle-----------	Ponderosa pine/bluebunch wheatgrass (CPG141)	Favorable	---	Pinegrass	25	
		Normal	---	Snowbrush ceanothus	10	
		Unfavorable	---	Saskatoon serviceberry	5	
				Antelope bitterbrush	5	
				Elk sedge	5	
				Kinnikinnick	5	
				Lupine	5	
				Myrtle pachistima	5	
				Slender hawkweed	5	
				Spirea	5	
				Western yarrow	5	
				Arrowleaf balsamroot	1	
				Spreading dogbane	1	
26:						
Aquic Cryumbrepts----	Mountain hemlock/Cascade azalea-blue (big) huckleberry (CMS356)	Favorable	---	Black crowberry	30	
		Normal	---	Mountain heather	30	
		Unfavorable	---	Huckleberry	10	
				Rusty menziesia	10	
				White spirea	5	
27:						
Ardening--------	Ponderosa pine/bluebunch wheatgrass (CPG141)	Favorable	---	Creambush oceanspray	15	
		Normal	---	Tall Oregongrape	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Bluebunch wheatgrass	10	
				Common snowberry	10	
				Lupine	10	
				Douglas maple	5	
				Saskatoon serviceberry	5	
				Dogbane	5	
				Elk sedge	5	
				Pinegrass	5	
				Western yarrow	3	
				Starry false Solomon's seal	2	
28:						
Ardenmont-------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Pinegrass	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	White spirea	10	
				Saskatoon serviceberry	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
29:						
Ardenmont-------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Pinegrass	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	White spirea	10	
				Saskatoon serviceberry	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
30:						
Ardenmont-------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Pinegrass	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	White spirea	10	
				Saskatoon serviceberry	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
31:						
Ardenmont-------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Pinegrass	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	White spirea	10	
				Saskatoon serviceberry	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
Swakane---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
32:						
Ardenvoir-------	Douglas-fir/pachistima/pinegrass (CDS412)	Favorable	---	Pinegrass	35	
		Normal	---	Arrowleaf balsamroot	15	
		Unfavorable	---	Saskatoon serviceberry	10	
				Ceanothus	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Lupine	5	
				Willow	5	
				Elk sedge	1	
				Kinnikinnick	1	
				Myrtle pachistima	1	
				Rose	1	
				Tall Oregongrape	1	
				Western yarrow	1	
33:						
Ardenvoir-------	Douglas-fir/pachistima/pinegrass (CDS412)	Favorable	---	Pinegrass	35	
		Normal	---	Arrowleaf balsamroot	15	
		Unfavorable	---	Saskatoon serviceberry	10	
				Ceanothus	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Lupine	5	
				Willow	5	
				Elk sedge	1	
				Kinnikinnick	1	
				Myrtle pachistima	1	
				Rose	1	
				Tall Oregongrape	1	
				Western yarrow	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
34:						
Azwell----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	35	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Elk sedge	10	
				Lupine	5	
				Prince's pine	5	
				Pyrola	5	
				Western yarrow	5	
				Willow	2	
Rock outcrop.						
35:						
Bagmont---------	Mountain Park (R006XY702WA)	Favorable	1,200	Fringed sagewort		25
		Normal	1,000	Bluebunch wheatgrass		20
		Unfavorable	800	Arrowleaf balsamroot		15
				Buckwheat		10
				Lupine		10
				Mountain big sagebrush		10
				Prairie Junegrass		5
				Skyrocket gilia		1
36:						
Bigcreek--------	Grand fir/pinegrass (CWG124)	Favorable	---	Northern twinflower	15	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Other perennial forbs	10	
				Other shrubs	10	
				Prince's pine	10	
				Elk sedge	5	
				Myrtle pachistima	5	
				Silky lupine	5	
				Western rattlesnake plantain	5	
37:						
Billyridge------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	40	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Common snowberry	10	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Cheatgrass	5	
				Elderberry	5	
				Other perennial grasslikes	5	
				Pinegrass	5	
				Spirea	5	
				Spreading dogbane	5	
				Tall Oregongrape	5	
				Western yarrow	5	
				White stoneseed	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
38:						
Billyridge------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	40	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Common snowberry	10	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Cheatgrass	5	
				Elderberry	5	
				Other perennial grasslikes	5	
				Pinegrass	5	
				Spirea	5	
				Spreading dogbane	5	
				Tall Oregongrape	5	
				Western yarrow	5	
				White stoneseed	5	
39:						
Billyridge------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	40	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Common snowberry	10	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Cheatgrass	5	
				Elderberry	5	
				Other perennial grasslikes	5	
				Pinegrass	5	
				Spirea	5	
				Spreading dogbane	5	
				Tall Oregongrape	5	
				Western yarrow	5	
				White stoneseed	5	
40:						
Bisping---------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Pinegrass	40	
		Normal	---	Bluebunch wheatgrass	15	
		Unfavorable	---	Elk sedge	10	
				Prairie Junegrass	10	
				Silky lupine	10	
				Antelope bitterbrush	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Snowbrush ceanothus	5	
41:						
Bisping---------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Pinegrass	40	
		Normal	---	Bluebunch wheatgrass	15	
		Unfavorable	---	Elk sedge	10	
				Prairie Junegrass	10	
				Silky lupine	10	
				Antelope bitterbrush	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Snowbrush ceanothus	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
42:						
Bisping	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Pinegrass	40	
		Normal	---	Bluebunch wheatgrass	15	
		Unfavorable	---	Elk sedge	10	
				Prairie Junegrass	10	
				Silky lupine	10	
				Antelope bitterbrush	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Snowbrush ceanothus	5	
43:						
Bjork	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		86
		Normal	900	Other perennial forbs		6
		Unfavorable	700	Silky lupine		5
				Threetip sagebrush		3
44:						
Bjork	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		86
		Normal	900	Other perennial forbs		6
		Unfavorable	700	Silky lupine		5
				Threetip sagebrush		3
Rock outcrop.						
45:						
Blag	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	75	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Sandberg bluegrass	5	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Thurber needlegrass	1	
				Biscuitroot	1	
				Elk sedge	1	
				Lupine	1	
				Penstemon	1	
				Raceme pussytoes	1	
				Snow buckwheat	1	
				Tarweed	1	
				Western yarrow	1	
				White spirea	1	
Cle Elum	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	15	
		Normal	---	Elk sedge	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Lupine	10	
				Pinegrass	10	
				Rose	10	
				Antelope bitterbrush	5	
				Western yarrow	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
46:						
Blag	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	75	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Sandberg bluegrass	5	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Thurber needlegrass	1	
				Biscuitroot	1	
				Elk sedge	1	
				Lupine	1	
				Penstemon	1	
				Raceme pussytoes	1	
				Snow buckwheat	1	
				Tarweed	1	
				Western yarrow	1	
				White spirea	1	
Rock outcrop.						
47:						
Blewett	Grand fir/pinegrass (CWG124)	Favorable	---	Elk sedge	25	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Bluebunch wheatgrass	10	
				White spirea	10	
				Arrowleaf balsamroot	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other perennial grasses	5	
				Other shrubs	5	
				Pinegrass	5	
				Rose	5	
				Western yarrow	5	
Rock outcrop.						
48:						
Borland	Dry Stony 15+ PZ (R006XY201WA)	Favorable	600	Bluebunch wheatgrass		20
		Normal	500	Idaho fescue		19
		Unfavorable	400	Sandberg bluegrass		13
				Carey's balsamroot		9
				Bottlebrush squirreltail		9
				Hood's phlox		8
				Buckwheat		6
				Common yarrow		6
				Longleaf phlox		5
				Phacelia		3
				Slenderbush eriogonum		2
				Threetip sagebrush		2
49:						
Borland	Dry Stony 15+ PZ (R006XY201WA)	Favorable	600	Bluebunch wheatgrass		20
		Normal	500	Idaho fescue		19
		Unfavorable	400	Sandberg bluegrass		13
				Carey's balsamroot		9
				Bottlebrush squirreltail		9
				Hood's phlox		8
				Buckwheat		6
				Common yarrow		6
				Longleaf phlox		5
				Phacelia		3
				Slenderbush eriogonum		2
				Threetip sagebrush		2

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
49:						
Rock outcrop.						
50:						
Brief-----------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Pinegrass	25	
		Normal	---	Other shrubs	20	
		Unfavorable	---	Antelope bitterbrush	10	
				Elk sedge	10	
				Other perennial grasses	10	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Other perennial forbs	5	
				White spirea	5	
				Bulbous woodlandstar	1	
				Tall Oregongrape	1	
				Western yarrow	1	
51:						
Brisky----------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Antelope bitterbrush	30	
		Normal	---	Bluebunch wheatgrass	15	
		Unfavorable	---	Pinegrass	10	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Elk sedge	5	
				Spreading dogbane	5	
				Stonecrop	5	
				Western yarrow	5	
Rock outcrop.						
52:						
Burch-----------	Dry Loamy 9-15 PZ (R008XY101WA)	Favorable	900	Bluebunch wheatgrass		73
		Normal	750	Sandberg bluegrass		12
		Unfavorable	600	Wyoming big sagebrush		12
				Threetip sagebrush		2
53:						
Burnscreek------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	40	
		Normal	---	Arrowleaf balsamroot	10	
		Unfavorable	---	Pinegrass	10	
				Saskatoon serviceberry	5	
				Antelope bitterbrush	5	
				Common snowberry	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Snowbrush ceanothus	5	
				Tall Oregongrape	5	
				Western yarrow	5	
54:						
Burrant---------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Pinegrass	20	
		Normal	---	Common snowberry	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Other shrubs	10	
				Rocky Mountain maple	5	
				Rose	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
55:						
Burrant	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Pinegrass	20	
		Normal	---	Common snowberry	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Other shrubs	10	
				Rocky Mountain maple	5	
				Rose	5	
56:						
Cashmont	Sandy 9-15 PZ (R008XY501WA)	Favorable	750	Bluebunch wheatgrass		59
		Normal	600	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
57:						
Cashmont	Sandy 9-15 PZ (R008XY501WA)	Favorable	750	Bluebunch wheatgrass		59
		Normal	600	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
58:						
Chapot	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Pinegrass	25	
		Normal	---	Rose	15	
		Unfavorable	---	Common snowberry	10	
				Creambush oceanspray	10	
				Lupine	10	
				Willow	10	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Tall Oregongrape	5	
				White spirea	5	
59:						
Chinkmin	Mountain hemlock/rusty menziesia-blue (big) huckleberry (CMS257)	Favorable	---	Cascade azalea	15	
		Normal	---	Blue huckleberry	15	
		Unfavorable	---	Rusty menziesia	10	
				Whortleberry	10	
				Bunchberry dogwood	5	
				Cascade Oregongrape	5	
				Northern twinflower	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Starry false Solomon's seal	5	
				Western teaberry	5	
60:						
Chinkmin	Mountain hemlock/rusty menziesia-blue (big) huckleberry (CMS257)	Favorable	---	Cascade azalea	15	
		Normal	---	Blue huckleberry	15	
		Unfavorable	---	Rusty menziesia	10	
				Whortleberry	10	
				Bunchberry dogwood	5	
				Cascade Oregongrape	5	
				Northern twinflower	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Starry false Solomon's seal	5	
				Western teaberry	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
61:						
Chinkmin--------	Mountain hemlock/rusty menziesia-blue (big) huckleberry (CMS257)	Favorable	---	Cascade azalea	15	
		Normal	---	Blue huckleberry	15	
		Unfavorable	---	Rusty menziesia	10	
				Whortleberry	10	
				Bunchberry dogwood	5	
				Cascade Oregongrape	5	
				Northern twinflower	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Starry false Solomon's seal	5	
				Western teaberry	5	
Altapeak--------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Longtube twinflower	10	
		Normal	---	Trailing blackberry	10	
		Unfavorable	---	Bunchberry dogwood	5	
				Common beargrass	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Rusty menziesia	5	
				Salal	5	
				Western teaberry	5	
62:						
Chinkmin--------	Mountain hemlock/rusty menziesia-blue (big) huckleberry (CMS257)	Favorable	---	Cascade azalea	15	
		Normal	---	Blue huckleberry	15	
		Unfavorable	---	Rusty menziesia	10	
				Whortleberry	10	
				Bunchberry dogwood	5	
				Cascade Oregongrape	5	
				Northern twinflower	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Starry false Solomon's seal	5	
				Western teaberry	5	
Altapeak--------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Longtube twinflower	10	
		Normal	---	Trailing blackberry	10	
		Unfavorable	---	Bunchberry dogwood	5	
				Common beargrass	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Rusty menziesia	5	
				Salal	5	
				Western teaberry	5	
63:						
Chiwaukum-------	Douglas-fir/pachistima (CDS411)	Favorable	---	Blue huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade Oregongrape	10	
				Pinegrass	10	
				Pinemat manzanita	10	
				Rose	10	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
64:						
Chiwaukum-------	Douglas-fir/pachistima (CDS411)	Favorable	---	Blue huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade Oregongrape	10	
				Pinegrass	10	
				Pinemat manzanita	10	
				Rose	10	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
65:						
Chiwaukum-------	Western hemlock/Cascade Oregongrape (CHS142)	Favorable	---	Myrtle pachistima	25	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Saskatoon serviceberry	5	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Rose	5	
				White spirea	5	
				Whiteveined shinleaf	5	
66:						
Chiwaukum-------	Douglas-fir/pachistima (CDS411)	Favorable	---	Blue huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade Oregongrape	10	
				Pinegrass	10	
				Pinemat manzanita	10	
				Rose	10	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
67:						
Chiwaukum-------	Douglas-fir/pachistima (CDS411)	Favorable	---	Blue huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade Oregongrape	10	
				Pinegrass	10	
				Pinemat manzanita	10	
				Rose	10	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
Chiwaukum, south	Western hemlock/Cascade Oregongrape (CHS142)	Favorable	---	Myrtle pachistima	25	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Saskatoon serviceberry	5	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Rose	5	
				White spirea	5	
				Whiteveined shinleaf	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
68:						
Chiwaukum-------	Douglas-fir/pachistima (CDS411)	Favorable	---	Blue huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade Oregongrape	10	
				Pinegrass	10	
				Pinemat manzanita	10	
				Rose	10	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
Chiwaukum, south	Western hemlock/Cascade Oregongrape (CHS142)	Favorable	---	Myrtle pachistima	25	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Saskatoon serviceberry	5	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Rose	5	
				White spirea	5	
				Whiteveined shinleaf	5	
69:						
Chiwawa---------	Grand fir/vine maple (CWS551)	Favorable	---	Pinegrass	30	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	White spirea	15	
				Creambush oceanspray	5	
				Elk sedge	5	
				Vine maple	5	
				Kinnikinnick	2	
				Low Oregongrape	2	
70:						
Choralmont, till substratum	Grand fir/pinegrass (CWG124)	Favorable	---	Blue huckleberry	10	
		Normal	---	Hairy brackenfern	10	
		Unfavorable	---	Myrtle pachistima	10	
				Thimbleberry	10	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Tall Oregongrape	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
				Whortleberry	5	
Choralmont------	Grand fir/pinegrass (CWG124)	Favorable	---	Blue huckleberry	10	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Bitter cherry	5	
				Hairy brackenfern	5	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Thimbleberry	5	
				Western rattlesnake plantain	5	
				White spirea	5	
				Whiteveined shinleaf	5	
				Whortleberry	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
71:						
Choralmont	Grand fir/pinegrass (CWG124)	Favorable	---	Blue huckleberry	10	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Bitter cherry	5	
				Hairy brackenfern	5	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Thimbleberry	5	
				Western rattlesnake plantain	5	
				White spirea	5	
				Whiteveined shinleaf	5	
				Whortleberry	5	
72:						
Choralmont	Grand fir/pinegrass (CWG124)	Favorable	---	Blue huckleberry	10	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Bitter cherry	5	
				Hairy brackenfern	5	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Thimbleberry	5	
				Western rattlesnake plantain	5	
				White spirea	5	
				Whiteveined shinleaf	5	
				Whortleberry	5	
73:						
Choralmont	Grand fir/pinegrass (CWG124)	Favorable	---	Blue huckleberry	10	
		Normal	---	Hairy brackenfern	10	
		Unfavorable	---	Myrtle pachistima	10	
				Thimbleberry	10	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Tall Oregongrape	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
				Whortleberry	5	
74:						
Choralmont	Grand fir/pinegrass (CWG124)	Favorable	---	Blue huckleberry	10	
		Normal	---	Hairy brackenfern	10	
		Unfavorable	---	Myrtle pachistima	10	
				Thimbleberry	10	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Tall Oregongrape	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
				Whortleberry	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
75:						
Choralmont------	Grand fir/pinegrass (CWG124)	Favorable	---	Blue huckleberry	10	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Bitter cherry	5	
				Hairy brackenfern	5	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Thimbleberry	5	
				Western rattlesnake plantain	5	
				White spirea	5	
				Whiteveined shinleaf	5	
				Whortleberry	5	
Limking---------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	25	
		Normal	---	Lupine	15	
		Unfavorable	---	Willow	15	
				Rocky Mountain maple	5	
				Ballhead waterleaf	5	
				Ceanothus	5	
				Myrtle pachistima	5	
				Penstemon	5	
				Serviceberry	5	
				Western yarrow	5	
				Slender hawkweed	3	
				Currant	2	
76:						
Chumstick-------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	20	
		Normal	---	Lupine	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Elk sedge	10	
				Idaho fescue	5	
				Rose	5	
				Snowbrush ceanothus	5	
				Spreading dogbane	5	
				Western yarrow	5	
77:						
Chumstick-------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	20	
		Normal	---	Lupine	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Elk sedge	10	
				Idaho fescue	5	
				Rose	5	
				Snowbrush ceanothus	5	
				Spreading dogbane	5	
				Western yarrow	5	
78:						
Chumstick-------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	20	
		Normal	---	Lupine	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Elk sedge	10	
				Idaho fescue	5	
				Rose	5	
				Snowbrush ceanothus	5	
				Spreading dogbane	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production: Kind of year	Total production: Dry Weight	Characteristic vegetation	Composition: Forest	Composition: Range
			Lb/acre		Pct	Pct
79:						
Cle Elum--------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Pinegrass	25	
		Normal	---	Rose	15	
		Unfavorable	---	Elk sedge	10	
				White spirea	10	
				Arrowleaf balsamroot	5	
				Bluebunch wheatgrass	5	
				Lupine	5	
				Other perennial grasses	5	
80:						
Cle Elum--------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	15	
		Normal	---	Elk sedge	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Lupine	10	
				Pinegrass	10	
				Rose	10	
				Antelope bitterbrush	5	
				Western yarrow	5	
81:						
Coopmont--------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Pinegrass	10	
				Prince's pine	5	
				Sidebells shinleaf	5	
				White spirea	5	
82:						
Coopmont--------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Pinegrass	10	
				Prince's pine	5	
				Sidebells shinleaf	5	
				White spirea	5	
83:						
Cowiche---------	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		50
		Normal	900	Idaho fescue		15
		Unfavorable	700	Other perennial grasses		10
				Sandberg bluegrass		5
				Wyoming big sagebrush		5
				Arrowleaf balsamroot		5
				Lupine		5
				Other perennial forbs		5
Cowiche, very deep------	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		50
		Normal	900	Idaho fescue		15
		Unfavorable	700	Other perennial grasses		10
				Sandberg bluegrass		5
				Wyoming big sagebrush		5
				Arrowleaf balsamroot		5
				Lupine		5
				Other perennial forbs		5

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
84:						
Cowiche---------	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		50
		Normal	900	Idaho fescue		15
		Unfavorable	700	Other perennial grasses		10
				Sandberg bluegrass		5
				Wyoming big sagebrush		5
				Arrowleaf balsamroot		5
				Lupine		5
				Other perennial forbs		5
Cowiche, very deep------	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		50
		Normal	900	Idaho fescue		15
		Unfavorable	700	Other perennial grasses		10
				Sandberg bluegrass		5
				Wyoming big sagebrush		5
				Arrowleaf balsamroot		5
				Lupine		5
				Other perennial forbs		5
85:						
Cryomont--------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Vine maple	15	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Devilsclub	10	
				Oval-leaf blueberry	10	
				Willow	10	
				Sitka alder	5	
				Hairy brackenfern	5	
				Red alder	5	
				Starry false Solomon's seal	5	
				Broadleaf starflower	3	
				Thimbleberry	3	
				Snow raspberry	2	
				Trillium	2	
86:						
Cryomont--------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Vine maple	15	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Devilsclub	10	
				Oval-leaf blueberry	10	
				Willow	10	
				Sitka alder	5	
				Starry false Solomon's seal	5	
				Western brackenfern	5	
				Broadleaf starflower	3	
				Thimbleberry	3	
				Trillium	2	
87:						
Cryomont--------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Vine maple	15	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Devilsclub	10	
				Oval-leaf blueberry	10	
				Willow	10	
				Sitka alder	5	
				Hairy brackenfern	5	
				Red alder	5	
				Starry false Solomon's seal	5	
				Broadleaf starflower	3	
				Thimbleberry	3	
				Snow raspberry	2	
				Trillium	2	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
87:						
Cryomont, fan	Pacific silver fir/vine maple (CFS621)	Favorable	---	Vine maple	15	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Devilsclub	10	
				Oval-leaf blueberry	10	
				Willow	10	
				Sitka alder	5	
				Starry false Solomon's seal	5	
				Western brackenfern	5	
				Broadleaf starflower	3	
				Thimbleberry	3	
				Trillium	2	
88:						
Culving	Grand fir/vanillaleaf (CWS524)	Favorable	---	Elk sedge	15	
		Normal	---	Rocky Mountain maple	10	
		Unfavorable	---	Myrtle pachistima	10	
				Alumroot	5	
				Cascade Oregongrape	5	
				Deerfoot vanillaleaf	5	
				Dwarf huckleberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
				White spirea	5	
				Common snowberry	2	
				Tall Oregongrape	2	
Rock outcrop.						
89:						
Culvop	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Sidebells shinleaf	15	
		Normal	---	Cascade azalea	10	
		Unfavorable	---	Heartleaf arnica	10	
				Myrtle pachistima	10	
				Willow	10	
				Dwarf huckleberry	5	
				Elk sedge	5	
				Lupine	5	
				Pinegrass	5	
				Rose	5	
				Western rattlesnake plantain	5	
90:						
Devore	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Pinegrass	25	
		Normal	---	Dwarf huckleberry	10	
		Unfavorable	---	Prince's pine	10	
				Elk sedge	5	
				Lupine	5	
				Myrtle pachistima	5	
				Pyrola	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
91:						
Dinkelman-------	Douglas-fir/bluebunch wheatgrass (CDG322)	Favorable	---	Common snowberry	40	
		Normal	---	Creambush oceanspray	8	
		Unfavorable	---	Baldhip rose	6	
				Pinegrass	6	
				Arrowleaf balsamroot	5	
				Bluebunch wheatgrass	5	
				Heartleaf arnica	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Spreading dogbane	5	
				Sweetcicely	5	
92:						
Dinkelman-------	Douglas-fir/bluebunch wheatgrass (CDG322)	Favorable	---	Common snowberry	40	
		Normal	---	Creambush oceanspray	8	
		Unfavorable	---	Baldhip rose	6	
				Pinegrass	6	
				Arrowleaf balsamroot	5	
				Bluebunch wheatgrass	5	
				Heartleaf arnica	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Spreading dogbane	5	
				Sweetcicely	5	
93:						
Dinkelman-------	Douglas-fir/bluebunch wheatgrass (CDG322)	Favorable	---	Common snowberry	40	
		Normal	---	Creambush oceanspray	8	
		Unfavorable	---	Baldhip rose	6	
				Pinegrass	6	
				Arrowleaf balsamroot	5	
				Bluebunch wheatgrass	5	
				Heartleaf arnica	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Spreading dogbane	5	
				Sweetcicely	5	
Rock outcrop.						
94:						
Dinkels---------	Sandy 9-15 PZ (R008XY501WA)	Favorable	1,000	Bluebunch wheatgrass		59
		Normal	800	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
95:						
Dinkels---------	Sandy 9-15 PZ (R008XY501WA)	Favorable	1,000	Bluebunch wheatgrass		59
		Normal	800	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
96:						
Dinkels---------	Sandy 9-15 PZ (R008XY501WA)	Favorable	1,000	Bluebunch wheatgrass		59
		Normal	800	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
97:						
Domkey----------	Grand fir/pinemat manzanita (CWS338)	Favorable	---	Pinegrass	20	
		Normal	---	Saskatoon serviceberry	10	
		Unfavorable	---	Creambush oceanspray	10	
				Willow	10	
				Indian paintbrush	5	
				Blue huckleberry	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Lupine	5	
				Pinemat manzanita	5	
				Western rattlesnake plantain	5	
				Western yarrow	5	
				White spirea	5	
98:						
Domkey----------	Grand fir/pinemat manzanita (CWS338)	Favorable	---	Pinegrass	20	
		Normal	---	Saskatoon serviceberry	10	
		Unfavorable	---	Creambush oceanspray	10	
				Willow	10	
				Indian paintbrush	5	
				Blue huckleberry	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Lupine	5	
				Pinemat manzanita	5	
				Western rattlesnake plantain	5	
				Western yarrow	5	
				White spirea	5	
99:						
Domkey----------	Grand fir/pinemat manzanita (CWS338)	Favorable	---	Pinegrass	20	
		Normal	---	Saskatoon serviceberry	10	
		Unfavorable	---	Creambush oceanspray	10	
				Willow	10	
				Indian paintbrush	5	
				Blue huckleberry	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Lupine	5	
				Pinemat manzanita	5	
				Western rattlesnake plantain	5	
				Western yarrow	5	
				White spirea	5	
McCree----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Arrowleaf balsamroot	25	
		Unfavorable	---	Antelope bitterbrush	10	
				Pinegrass	5	
				Prairie Junegrass	5	
				Silky lupine	5	
				Groundsel	3	
				Western yarrow	2	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
100:						
Dragoon---------	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Idaho fescue	35	
		Normal	---	Bluebunch wheatgrass	10	
		Unfavorable	---	Pinegrass	10	
				Other perennial forbs	8	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Common snowberry	5	
				Other shrubs	5	
				Other perennial grasses	4	
				Elk sedge	3	
				Needlegrass	3	
				Blue wildrye	2	
				Prairie Junegrass	2	
				Rose	2	
				Strawberry	1	
101:						
Dragoon---------	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Idaho fescue	35	
		Normal	---	Bluebunch wheatgrass	10	
		Unfavorable	---	Pinegrass	10	
				Other perennial forbs	8	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Common snowberry	5	
				Other shrubs	5	
				Other perennial grasses	4	
				Elk sedge	3	
				Needlegrass	3	
				Blue wildrye	2	
				Prairie Junegrass	2	
				Rose	2	
				Strawberry	1	
102:						
Entiat----------	Sandy 9-15 PZ (R008XY501WA)	Favorable	600	Bluebunch wheatgrass		59
		Normal	500	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
103:						
Entiat----------	Sandy 9-15 PZ (R008XY501WA)	Favorable	600	Bluebunch wheatgrass		59
		Normal	500	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
Rock outcrop.						
104:						
Entic Haplumbrepts---	---	Favorable	---	Indian paintbrush	5	
		Normal	---	Elk sedge	5	
		Unfavorable	---	Pinegrass	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
105:						
Esmeralda-------	Mountain hemlock/Cascade azalea-blue (big) huckleberry (CMS356)	Favorable	---	Dwarf huckleberry	30	
		Normal	---	Blue huckleberry	20	
		Unfavorable	---	Cascade azalea	15	
				Myrtle pachistima	15	
				Lupine	10	
				Rusty menziesia	10	
106:						
Esmeralda-------	Mountain hemlock/Cascade azalea-blue (big) huckleberry (CMS356)	Favorable	---	Dwarf huckleberry	30	
		Normal	---	Blue huckleberry	20	
		Unfavorable	---	Cascade azalea	15	
				Myrtle pachistima	15	
				Lupine	10	
				Rusty menziesia	10	
Rock outcrop.						
107:						
Fears-----------	Subalpine fir/pachistima (CES113)	Favorable	---	Lupine	30	
		Normal	---	Dwarf huckleberry	10	
		Unfavorable	---	Myrtle pachistima	10	
				Elk sedge	5	
				Polemonium	5	
				Rusty menziesia	5	
108:						
Fears-----------	Subalpine fir/pachistima (CES113)	Favorable	---	Lupine	30	
		Normal	---	Dwarf huckleberry	10	
		Unfavorable	---	Myrtle pachistima	10	
				Elk sedge	5	
				Polemonium	5	
				Rusty menziesia	5	
Devore----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Pinegrass	25	
		Normal	---	Dwarf huckleberry	10	
		Unfavorable	---	Prince's pine	10	
				Elk sedge	5	
				Lupine	5	
				Myrtle pachistima	5	
				Pyrola	5	
109:						
Fernow----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade azalea	10	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Cascade Oregongrape	10	
				Hairy brackenfern	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Starry false Solomon's seal	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
				Western swordfern	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
110:						
Fernow	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade azalea	10	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Cascade Oregongrape	10	
				Hairy brackenfern	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Starry false Solomon's seal	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
				Western swordfern	5	
111:						
Fernow	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade azalea	10	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Cascade Oregongrape	10	
				Hairy brackenfern	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Starry false Solomon's seal	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
				Western swordfern	5	
Serene	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	40	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Oval-leaf blueberry	10	
				Trailing blackberry	5	
				Vine maple	5	
				Western rattlesnake plantain	1	
112:						
Fluvaquents	---	Favorable	---	Willow	40	
		Normal	---	Elk sedge	5	
		Unfavorable	---	Hairy brackenfern	5	
				Pinegrass	5	
				Redosier dogwood	5	
				Western yarrow	5	
113:						
Georgecreek	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Common snowberry	45	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Other perennial forbs	10	
				Idaho fescue	5	
				Saskatoon serviceberry	5	
				Cascade Oregongrape	5	
				Other shrubs	5	
				Silky lupine	5	
				Common yarrow	2	
				Bluebunch wheatgrass	1	
				Other annual forbs	1	
				Other perennial grasses	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
114:						
Georgecreek-----	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Bluebunch wheatgrass	10	
		Normal	---	Pinegrass	10	
		Unfavorable	---	Idaho fescue	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Common yarrow	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Silky lupine	5	
				Antelope bitterbrush	2	
				Other annual forbs	2	
				Other shrubs	2	
115:						
Georgecreek-----	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Bluebunch wheatgrass	10	
		Normal	---	Pinegrass	10	
		Unfavorable	---	Idaho fescue	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Common yarrow	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Silky lupine	5	
				Antelope bitterbrush	2	
				Other annual forbs	2	
				Other shrubs	2	
116:						
Georgecreek-----	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Common snowberry	45	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Other perennial forbs	10	
				Idaho fescue	5	
				Saskatoon serviceberry	5	
				Cascade Oregongrape	5	
				Other shrubs	5	
				Silky lupine	5	
				Common yarrow	2	
				Bluebunch wheatgrass	1	
				Other annual forbs	1	
				Other perennial grasses	1	
Dragoon---------	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Idaho fescue	35	
		Normal	---	Bluebunch wheatgrass	10	
		Unfavorable	---	Pinegrass	10	
				Other perennial forbs	8	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Common snowberry	5	
				Other shrubs	5	
				Other perennial grasses	4	
				Elk sedge	3	
				Needlegrass	3	
				Blue wildrye	2	
				Prairie Junegrass	2	
				Rose	2	
				Strawberry	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
117:						
Georgecreek-----	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Common snowberry	45	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Other perennial forbs	10	
				Idaho fescue	5	
				Saskatoon serviceberry	5	
				Cascade Oregongrape	5	
				Other shrubs	5	
				Silky lupine	5	
				Common yarrow	2	
				Bluebunch wheatgrass	1	
				Other annual forbs	1	
				Other perennial grasses	1	
Dragoon---------	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Idaho fescue	35	
		Normal	---	Bluebunch wheatgrass	10	
		Unfavorable	---	Pinegrass	10	
				Other perennial forbs	8	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Common snowberry	5	
				Other shrubs	5	
				Other perennial grasses	4	
				Elk sedge	3	
				Needlegrass	3	
				Blue wildrye	2	
				Prairie Junegrass	2	
				Rose	2	
				Strawberry	1	
118:						
Gilpar----------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Dwarf huckleberry	35	
		Normal	---	Vine maple	20	
		Unfavorable	---	Myrtle pachistima	15	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
119:						
Gilpar----------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Dwarf huckleberry	35	
		Normal	---	Vine maple	20	
		Unfavorable	---	Myrtle pachistima	15	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
Nimue-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
120:						
Gilpar----------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Dwarf huckleberry	35	
		Normal	---	Vine maple	20	
		Unfavorable	---	Myrtle pachistima	15	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
Nimue-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	
Rock outcrop.						
121:						
Gilpar----------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Dwarf huckleberry	35	
		Normal	---	Vine maple	20	
		Unfavorable	---	Myrtle pachistima	15	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
Rock outcrop.						
122. Glaciers, snowfields						
123:						
Goffpeak--------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Idaho fescue	10	
		Normal	---	Lupine	10	
		Unfavorable	---	Myrtle pachistima	10	
				Pinegrass	10	
				Willow	10	
				Dwarf huckleberry	5	
				Prince's pine	5	
				Sticky currant	5	
				Western yarrow	5	
				White spirea	5	
				Heartleaf arnica	1	
				Thinleaf alder	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
124:						
Goffpeak--------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Idaho fescue	10	
		Normal	---	Lupine	10	
		Unfavorable	---	Myrtle pachistima	10	
				Pinegrass	10	
				Willow	10	
				Dwarf huckleberry	5	
				Prince's pine	5	
				Sticky currant	5	
				Western yarrow	5	
				White spirea	5	
				Heartleaf arnica	1	
				Thinleaf alder	1	
Fears-----------	Subalpine fir/pachistima (CES113)	Favorable	---	Lupine	30	
		Normal	---	Dwarf huckleberry	10	
		Unfavorable	---	Myrtle pachistima	10	
				Elk sedge	5	
				Polemonium	5	
				Rusty menziesia	5	
125:						
Haplocryods, cold-----------	---	Favorable	---	Indian paintbrush	5	
		Normal	---	Pinegrass	5	
		Unfavorable	---	Elk sedge	5	
				Western yarrow	5	
Haplocryods, stony----------	Whitebark pine/pinegrass (CAG112)	Favorable	---	Indian paintbrush	5	
		Normal	---	Blue huckleberry	5	
		Unfavorable	---	Elk sedge	5	
				Heartleaf arnica	5	
				Pinegrass	5	
				Polemonium	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
				Western yarrow	5	
126:						
Haplocryods-----	Pacific silver fir/vine maple (CFS621)	Favorable	---	Blue huckleberry	25	
		Normal	---	Vine maple	20	
		Unfavorable	---	Myrtle pachistima	10	
				Cascade Oregongrape	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Western brackenfern	5	
				Western rattlesnake plantain	5	
				Western teaberry	5	
				Prince's pine	2	
				Starry false Solomon's seal	2	
				Trillium	2	
				Rose	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
126:						
Andic Cryochrepts----	Whitebark pine/pinegrass (CAG112)	Favorable	---	Indian paintbrush	5	
		Normal	---	Elk sedge	5	
		Unfavorable	---	Pinegrass	5	
				Polemonium	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Western yarrow	5	
Rock outcrop.						
127:						
Haploxerolls----	Ponderosa pine/bluebunch wheatgrass (CPG141)	Favorable	---	Bluebunch wheatgrass	25	
		Normal	---	Antelope bitterbrush	15	
		Unfavorable	---	Idaho fescue	10	
				Other perennial forbs	10	
				Other perennial grasses	10	
				Arrowleaf balsamroot	5	
				Bitter cherry	5	
				Common snowberry	5	
				Lupine	5	
				Myrtle pachistima	5	
				Western yarrow	5	
128:						
Haploxerolls----	Ponderosa pine/bluebunch wheatgrass (CPG141)	Favorable	---	Bluebunch wheatgrass	25	
		Normal	---	Antelope bitterbrush	15	
		Unfavorable	---	Idaho fescue	10	
				Other perennial forbs	10	
				Other perennial grasses	10	
				Arrowleaf balsamroot	5	
				Bitter cherry	5	
				Common snowberry	5	
				Lupine	5	
				Myrtle pachistima	5	
				Western yarrow	5	
129:						
Humicryods------	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Dwarf huckleberry	20	
		Normal	---	Cascade azalea	15	
		Unfavorable	---	Currant	10	
				Western goldentop	10	
				Sitka mountainash	5	
				Elk sedge	5	
				Lupine	5	
				Polemonium	5	
				Snow raspberry	5	
				Western pearlyeverlasting	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
129:						
Andic Cryumbrepts----	Subalpine Park (R006XY704WA)	Favorable	1,100	Greenleaf fescue	20	
		Normal	900	Biscuitroot	10	
		Unfavorable	700	Elk sedge	10	
				American bistort	5	
				Indian paintbrush	5	
				Aster	5	
				Common yarrow	5	
				Houndstongue hawkweed	5	
				Longleaf hawksbeard	5	
				Lupine	5	
				Pinegrass	5	
				Rosy pussytoes	5	
				Spike trisetum	5	
130:						
Humicryods------	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Dwarf huckleberry	20	
		Normal	---	Cascade azalea	15	
		Unfavorable	---	Currant	10	
				Western goldentop	10	
				Sitka mountainash	5	
				Elk sedge	5	
				Lupine	5	
				Polemonium	5	
				Snow raspberry	5	
				Western pearlyeverlasting	5	
Andic Cryochrepts----	Whitebark pine/pinegrass (CAG112)	Favorable	---	Indian paintbrush	5	
		Normal	---	Elk sedge	5	
		Unfavorable	---	Pinegrass	5	
				Polemonium	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Western yarrow	5	
Rock outcrop.						
131:						
Humicryods------	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Dwarf huckleberry	20	
		Normal	---	Cascade azalea	15	
		Unfavorable	---	Currant	10	
				Western goldentop	10	
				Sitka mountainash	5	
				Elk sedge	5	
				Lupine	5	
				Polemonium	5	
				Snow raspberry	5	
				Western pearlyeverlasting	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
131:						
Andic Cryumbrepts----	Subalpine Park (R006XY704WA)	Favorable	1,100	Greenleaf fescue	20	
		Normal	900	Biscuitroot	10	
		Unfavorable	700	Elk sedge	10	
				American bistort	5	
				Indian paintbrush	5	
				Aster	5	
				Common yarrow	5	
				Houndstongue hawkweed	5	
				Longleaf hawksbeard	5	
				Lupine	5	
				Pinegrass	5	
				Rosy pussytoes	5	
				Spike trisetum	5	
Rock outcrop.						
132:						
Hyprairie-------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
133:						
Hyprairie-------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
134:						
Hyprairie-------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
Oldbutte--------	Ponderosa pine/bluebunch wheatgrass (CPG141)	Favorable	---	Idaho fescue	20	
		Normal	---	Bluebunch wheatgrass	20	
		Unfavorable	---	Common snowberry	20	
				Cherry	10	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Other annual forbs	5	
				Rose	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
135:						
Icicle, south---	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rocky Mountain maple	15	
		Normal	---	Hairy brackenfern	15	
		Unfavorable	---	Pinegrass	15	
				American trailplant	5	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Prince's pine	5	
				Spreading dogbane	5	
				Tall Oregongrape	5	
				White spirea	5	
				Oregon fairybells	1	
				Rose	1	
				Starry false Solomon's seal	1	
Icicle----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rocky Mountain maple	15	
		Normal	---	Hairy brackenfern	15	
		Unfavorable	---	Pinegrass	15	
				American trailplant	5	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Prince's pine	5	
				Spreading dogbane	5	
				Tall Oregongrape	5	
				White spirea	5	
				Oregon fairybells	1	
				Rose	1	
				Starry false Solomon's seal	1	
136:						
Icicle----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rocky Mountain maple	15	
		Normal	---	Hairy brackenfern	15	
		Unfavorable	---	Pinegrass	15	
				American trailplant	5	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Prince's pine	5	
				Spreading dogbane	5	
				Tall Oregongrape	5	
				White spirea	5	
				Oregon fairybells	1	
				Rose	1	
				Starry false Solomon's seal	1	
137:						
Icicle----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rocky Mountain maple	15	
		Normal	---	Hairy brackenfern	15	
		Unfavorable	---	Pinegrass	15	
				American trailplant	5	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Prince's pine	5	
				Spreading dogbane	5	
				Tall Oregongrape	5	
				White spirea	5	
				Oregon fairybells	1	
				Rose	1	
				Starry false Solomon's seal	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
138:						
Icicle----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rocky Mountain maple	15	
		Normal	---	Hairy brackenfern	15	
		Unfavorable	---	Pinegrass	15	
				American trailplant	5	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Prince's pine	5	
				Spreading dogbane	5	
				Tall Oregongrape	5	
				White spirea	5	
				Oregon fairybells	1	
				Rose	1	
				Starry false Solomon's seal	1	
139:						
Icicle----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rocky Mountain maple	15	
		Normal	---	Hairy brackenfern	15	
		Unfavorable	---	Pinegrass	15	
				American trailplant	5	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Prince's pine	5	
				Spreading dogbane	5	
				Tall Oregongrape	5	
				White spirea	5	
				Oregon fairybells	1	
				Rose	1	
				Starry false Solomon's seal	1	
140:						
Icicle----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Elk sedge	10	
				Rocky Mountain maple	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Snowbrush ceanothus	5	
				White spirea	5	
				Rose	4	
				American trailplant	1	
				Oregon fairybells	1	
				Tall Oregongrape	1	
				Common snowberry	0	
Chumstick-------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	20	
		Normal	---	Lupine	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Elk sedge	10	
				Idaho fescue	5	
				Rose	5	
				Snowbrush ceanothus	5	
				Spreading dogbane	5	
				Western yarrow	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
141:						
Icicle----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Elk sedge	10	
				Rocky Mountain maple	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Snowbrush ceanothus	5	
				White spirea	5	
				Rose	4	
				American trailplant	1	
				Oregon fairybells	1	
				Tall Oregongrape	1	
				Common snowberry	0	
Chumstick-------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	20	
		Normal	---	Lupine	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Elk sedge	10	
				Idaho fescue	5	
				Rose	5	
				Snowbrush ceanothus	5	
				Spreading dogbane	5	
				Western yarrow	5	
Rock outcrop.						
142:						
Inkler----------	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Spirea	35	
		Normal	---	Rose	15	
		Unfavorable	---	Elk sedge	10	
				Rocky Mountain maple	5	
				Little prince's pine	5	
				Myrtle pachistima	5	
				Oceanspray	5	
				Pinegrass	5	
				Serviceberry	5	
				Western rattlesnake plantain	5	
143:						
Isella----------	Mountain hemlock/Cascade azalea-blue (big) huckleberry (CMS356)	Favorable	---	Cascade azalea	20	
		Normal	---	Dwarf huckleberry	20	
		Unfavorable	---	Pink mountainheath	20	
				Sitka mountainash	10	
				Elk sedge	5	
				Heartleaf arnica	5	
				Lupine	5	
				Sidebells shinleaf	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
143:						
Fernow----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade azalea	10	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Cascade Oregongrape	10	
				Hairy brackenfern	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Starry false Solomon's seal	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
				Western swordfern	5	
144:						
Isella----------	Mountain hemlock/Cascade azalea-blue (big) huckleberry (CMS356)	Favorable	---	Cascade azalea	20	
		Normal	---	Dwarf huckleberry	20	
		Unfavorable	---	Pink mountainheath	20	
				Sitka mountainash	10	
				Elk sedge	5	
				Heartleaf arnica	5	
				Lupine	5	
				Sidebells shinleaf	1	
Fernow----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade azalea	10	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Cascade Oregongrape	10	
				Hairy brackenfern	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Starry false Solomon's seal	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
				Western swordfern	5	
145:						
Isella----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	30	
		Normal	---	Cascade azalea	10	
		Unfavorable	---	Currant	10	
				Myrtle pachistima	10	
				Snow raspberry	10	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
Nimue-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
146:						
Isella----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	30	
		Normal	---	Cascade azalea	10	
		Unfavorable	---	Currant	10	
				Myrtle pachistima	10	
				Snow raspberry	10	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
Nimue-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	
147:						
Kingmont--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Cascade Oregongrape	25	
		Normal	---	Elk sedge	10	
		Unfavorable	---	Common snowberry	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Pinegrass	5	
				Rose	5	
				Sedge	5	
				White spirea	5	
				Creambush oceanspray	1	
148:						
Kladnick--------	Western hemlock/Cascade Oregongrape (CHS142)	Favorable	---	Rocky Mountain maple	20	
		Normal	---	Northern twinflower	15	
		Unfavorable	---	Tall Oregongrape	15	
				Common snowberry	10	
				Myrtle pachistima	10	
				White spirea	10	
				Cascade Oregongrape	5	
				Sidebells shinleaf	5	
149:						
Kladnick--------	Western hemlock/Cascade Oregongrape (CHS142)	Favorable	---	Common snowberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Blue huckleberry	10	
				Low Oregongrape	10	
				Vine maple	10	
				Saskatoon serviceberry	5	
				Baldhip rose	5	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Hazelnut	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
150:						
Kladnick--------	Grand fir/pinemat manzanita (CWS338)	Favorable	---	Saskatoon serviceberry	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Currant	10	
				Pinemat manzanita	10	
				Prince's pine	10	
				Willow	10	
				Blue huckleberry	2	
				Cascade Oregongrape	2	
				Northern twinflower	2	
				Tall Oregongrape	2	
				Western rattlesnake plantain	2	
				White spirea	2	
151:						
Klapatche-------	Western hemlock/Cascade Oregongrape (CHS142)	Favorable	---	Blue huckleberry	20	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Dwarf huckleberry	10	
				Western teaberry	10	
				Myrtle pachistima	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
				Rusty menziesia	3	
				Longtube twinflower	1	
Altapeak--------	Mountain hemlock/rusty menziesia-Alaska huckleberry (CMS256)	Favorable	---	Oval-leaf blueberry	25	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Trailing blackberry	5	
152:						
Kloochman-------	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	10	
		Unfavorable	---	White spirea	10	
				Creambush oceanspray	5	
				Heartleaf arnica	5	
				Lupine	5	
				Other annual forbs	5	
				Snowbrush ceanothus	5	
				Saskatoon serviceberry	1	
				Rose	1	
				Vetch	1	
				Western yarrow	1	
153:						
Kloochman-------	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	10	
		Unfavorable	---	White spirea	10	
				Creambush oceanspray	5	
				Heartleaf arnica	5	
				Lupine	5	
				Other annual forbs	5	
				Snowbrush ceanothus	5	
				Saskatoon serviceberry	1	
				Rose	1	
				Vetch	1	
				Western yarrow	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
154:						
Kloochman-------	Grand fir/oceanspray/pinegrass	Favorable	---	Pinegrass	25	
	(CWS554)	Normal	---	Elk sedge	10	
		Unfavorable	---	White spirea	10	
				Creambush oceanspray	5	
				Heartleaf arnica	5	
				Lupine	5	
				Other annual forbs	5	
				Snowbrush ceanothus	5	
				Saskatoon serviceberry	1	
				Rose	1	
				Vetch	1	
				Western yarrow	1	
155:						
Kloochman-------	Grand fir/oceanspray/pinegrass	Favorable	---	Pinegrass	25	
	(CWS554)	Normal	---	Elk sedge	10	
		Unfavorable	---	White spirea	10	
				Creambush oceanspray	5	
				Heartleaf arnica	5	
				Lupine	5	
				Other annual forbs	5	
				Snowbrush ceanothus	5	
				Saskatoon serviceberry	1	
				Rose	1	
				Vetch	1	
				Western yarrow	1	
Inkler----------	Grand fir/oceanspray/pinegrass	Favorable	---	Spirea	35	
	(CWS554)	Normal	---	Rose	15	
		Unfavorable	---	Elk sedge	10	
				Rocky Mountain maple	5	
				Little prince's pine	5	
				Myrtle pachistima	5	
				Oceanspray	5	
				Pinegrass	5	
				Serviceberry	5	
				Western rattlesnake plantain	5	
156:						
Kloochman-------	Grand fir/oceanspray/pinegrass	Favorable	---	Pinegrass	25	
	(CWS554)	Normal	---	Elk sedge	10	
		Unfavorable	---	White spirea	10	
				Creambush oceanspray	5	
				Heartleaf arnica	5	
				Lupine	5	
				Other annual forbs	5	
				Snowbrush ceanothus	5	
				Saskatoon serviceberry	1	
				Rose	1	
				Vetch	1	
				Western yarrow	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
156:						
Inkler	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Spirea	35	
		Normal	---	Rose	15	
		Unfavorable	---	Elk sedge	10	
				Rocky Mountain maple	5	
				Little prince's pine	5	
				Myrtle pachistima	5	
				Oceanspray	5	
				Pinegrass	5	
				Serviceberry	5	
				Western rattlesnake plantain	5	
Rock outcrop.						
157:						
Kloochman	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	10	
		Unfavorable	---	White spirea	10	
				Creambush oceanspray	5	
				Heartleaf arnica	5	
				Lupine	5	
				Other annual forbs	5	
				Snowbrush ceanothus	5	
				Saskatoon serviceberry	1	
				Rose	1	
				Vetch	1	
				Western yarrow	1	
Rock outcrop.						
158:						
Limking	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	25	
		Normal	---	Lupine	15	
		Unfavorable	---	Willow	15	
				Rocky Mountain maple	5	
				Ballhead waterleaf	5	
				Ceanothus	5	
				Myrtle pachistima	5	
				Penstemon	5	
				Serviceberry	5	
				Western yarrow	5	
				Slender hawkweed	3	
				Currant	2	
159:						
Limking	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	25	
		Normal	---	Lupine	15	
		Unfavorable	---	Willow	15	
				Rocky Mountain maple	5	
				Ballhead waterleaf	5	
				Ceanothus	5	
				Myrtle pachistima	5	
				Penstemon	5	
				Serviceberry	5	
				Western yarrow	5	
				Slender hawkweed	3	
				Currant	2	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
159:						
Coopmont--------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Pinegrass	10	
				Prince's pine	5	
				Sidebells shinleaf	5	
				White spirea	5	
160:						
Limking---------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	25	
		Normal	---	Lupine	15	
		Unfavorable	---	Willow	15	
				Rocky Mountain maple	5	
				Ballhead waterleaf	5	
				Ceanothus	5	
				Myrtle pachistima	5	
				Penstemon	5	
				Serviceberry	5	
				Western yarrow	5	
				Slender hawkweed	3	
				Currant	2	
Coopmont--------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Pinegrass	10	
				Prince's pine	5	
				Sidebells shinleaf	5	
				White spirea	5	
161:						
Limking---------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	25	
		Normal	---	Lupine	15	
		Unfavorable	---	Willow	15	
				Rocky Mountain maple	5	
				Ballhead waterleaf	5	
				Ceanothus	5	
				Myrtle pachistima	5	
				Penstemon	5	
				Serviceberry	5	
				Western yarrow	5	
				Slender hawkweed	3	
				Currant	2	
Coopmont--------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Pinegrass	10	
				Prince's pine	5	
				Sidebells shinleaf	5	
				White spirea	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
162:						
Limking---------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	25	
		Normal	---	Lupine	15	
		Unfavorable	---	Willow	15	
				Rocky Mountain maple	5	
				Ballhead waterleaf	5	
				Ceanothus	5	
				Myrtle pachistima	5	
				Penstemon	5	
				Serviceberry	5	
				Western yarrow	5	
				Slender hawkweed	3	
				Currant	2	
Rock outcrop.						
163:						
Line------------	Western hemlock/pinemat manzanita (CHS144)	Favorable	---	Dwarf huckleberry	20	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Pinemat manzanita	10	
				Prince's pine	10	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Longtube twinflower	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
				Western teaberry	5	
				Western brackenfern	1	
164:						
Line------------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Myrtle pachistima	15	
		Normal	---	Western teaberry	15	
		Unfavorable	---	Pacific yew	5	
				Cascade Oregongrape	5	
				Dwarf huckleberry	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Rusty menziesia	5	
				Sidebells shinleaf	5	
				Vine maple	5	
				Western brackenfern	5	
				Western rattlesnake plantain	5	
165:						
Line------------	Western hemlock/vine maple/queencup beadlily (CHS227)	Favorable	---	Blue huckleberry	20	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Myrtle pachistima	10	
				Cascade Oregongrape	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Vine maple	5	
				Western rattlesnake plantain	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
166:						
Line------------	Western hemlock/pinemat manzanita (CHS144)	Favorable	---	Dwarf huckleberry	20	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Pinemat manzanita	10	
				Prince's pine	10	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Longtube twinflower	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
				Western teaberry	5	
				Western brackenfern	1	
Vabbing---------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Evergreen huckleberry	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Pyrola	5	
				Western teaberry	5	
				White spirea	5	
				Broadleaf starflower	1	
				Western swordfern	1	
167:						
Loneridge-------	Grand fir/pinemat manzanita (CWS338)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	20	
		Unfavorable	---	Snowbrush ceanothus	10	
				Antelope bitterbrush	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Low Oregongrape	5	
				Lupine	5	
				Pinemat manzanita	5	
168:						
Loneridge-------	Grand fir/pinemat manzanita (CWS338)	Favorable	---	Pinegrass	40	
		Normal	---	Elk sedge	30	
		Unfavorable	---	Low Oregongrape	10	
				Lupine	10	
				Common snowberry	5	
				Creambush oceanspray	5	
				Penstemon	5	
				Pinemat manzanita	5	
169:						
Loneridge-------	Grand fir/pinemat manzanita (CWS338)	Favorable	---	Pinegrass	40	
		Normal	---	Elk sedge	30	
		Unfavorable	---	Low Oregongrape	10	
				Lupine	10	
				Common snowberry	5	
				Creambush oceanspray	5	
				Penstemon	5	
				Pinemat manzanita	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
170:						
Macreeing-------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Antelope bitterbrush	30	
		Normal	---	Pinegrass	25	
		Unfavorable	---	Snowbrush ceanothus	15	
				Other perennial forbs	10	
				Silky lupine	10	
				Arrowleaf balsamroot	5	
				Bluebunch wheatgrass	5	
171:						
Macreeing-------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Antelope bitterbrush	30	
		Normal	---	Pinegrass	25	
		Unfavorable	---	Snowbrush ceanothus	15	
				Other perennial forbs	10	
				Silky lupine	10	
				Arrowleaf balsamroot	5	
				Bluebunch wheatgrass	5	
172:						
Macreeing-------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Antelope bitterbrush	30	
		Normal	---	Pinegrass	25	
		Unfavorable	---	Snowbrush ceanothus	15	
				Other perennial forbs	10	
				Silky lupine	10	
				Arrowleaf balsamroot	5	
				Bluebunch wheatgrass	5	
Rock outcrop.						
173:						
Mansonia--------	Sandy 9-15 PZ (R008XY501WA)	Favorable	1,200	Bluebunch wheatgrass		59
		Normal	1,000	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
174:						
Mansonia--------	Sandy 9-15 PZ (R008XY501WA)	Favorable	1,000	Bluebunch wheatgrass		59
		Normal	800	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
Swakane---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
Rock outcrop.						
175:						
Mansonia--------	Sandy 9-15 PZ (R008XY501WA)	Favorable	750	Bluebunch wheatgrass		59
		Normal	600	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
175:						
Swakane---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
Rock outcrop.						
176:						
Marmont---------	Sandy 9-15 PZ (R008XY501WA)	Favorable	800	Bluebunch wheatgrass		59
		Normal	600	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
177:						
Marmont---------	Sandy 9-15 PZ (R008XY501WA)	Favorable	800	Bluebunch wheatgrass		59
		Normal	600	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
178:						
Marmont---------	Sandy 9-15 PZ (R008XY501WA)	Favorable	800	Bluebunch wheatgrass		59
		Normal	600	Idaho fescue		15
		Unfavorable	400	Wyoming big sagebrush		7
				Antelope bitterbrush		7
				Arrowleaf balsamroot		4
				Threetip sagebrush		4
				Slenderbush eriogonum		3
179:						
McCree----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Arrowleaf balsamroot	25	
		Unfavorable	---	Antelope bitterbrush	10	
				Pinegrass	5	
				Prairie Junegrass	5	
				Silky lupine	5	
				Groundsel	3	
				Western yarrow	2	
180:						
McCree----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Arrowleaf balsamroot	25	
		Unfavorable	---	Antelope bitterbrush	10	
				Pinegrass	5	
				Prairie Junegrass	5	
				Silky lupine	5	
				Groundsel	3	
				Western yarrow	2	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
181:						
McCree----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Arrowleaf balsamroot	25	
		Unfavorable	---	Antelope bitterbrush	10	
				Pinegrass	5	
				Prairie Junegrass	5	
				Silky lupine	5	
				Groundsel	3	
				Western yarrow	2	
182:						
McCree----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Arrowleaf balsamroot	25	
		Unfavorable	---	Antelope bitterbrush	10	
				Pinegrass	5	
				Prairie Junegrass	5	
				Silky lupine	5	
				Groundsel	3	
				Western yarrow	2	
Palmich---------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	40	
		Normal	---	White spirea	10	
		Unfavorable	---	Arrowleaf balsamroot	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other shrubs	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	
183:						
McCree----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Arrowleaf balsamroot	25	
		Unfavorable	---	Antelope bitterbrush	10	
				Pinegrass	5	
				Prairie Junegrass	5	
				Silky lupine	5	
				Groundsel	3	
				Western yarrow	2	
Palmont---------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	25	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Baldhip rose	5	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Raceme pussytoes	5	
				Snowbrush ceanothus	5	
				Strawberry	5	
				Western rattlesnake plantain	5	
				White spirea	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
184:						
McCree----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Arrowleaf balsamroot	25	
		Unfavorable	---	Antelope bitterbrush	10	
				Pinegrass	5	
				Prairie Junegrass	5	
				Silky lupine	5	
				Groundsel	3	
				Western yarrow	2	
Rock outcrop.						
185:						
Mippon----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rose	15	
		Normal	---	Alder	10	
		Unfavorable	---	Common snowberry	10	
				Creambush oceanspray	10	
				Elderberry	10	
				Redosier dogwood	10	
				Idaho fescue	5	
				Cascade Oregongrape	5	
				Currant	5	
				Elk sedge	5	
				Pinegrass	5	
				Western yarrow	5	
				White spirea	5	
186:						
Mippon----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rose	15	
		Normal	---	Alder	10	
		Unfavorable	---	Common snowberry	10	
				Creambush oceanspray	10	
				Elderberry	10	
				Redosier dogwood	10	
				Idaho fescue	5	
				Cascade Oregongrape	5	
				Currant	5	
				Elk sedge	5	
				Pinegrass	5	
				Western yarrow	5	
				White spirea	5	
187:						
Mippon----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rose	15	
		Normal	---	Alder	10	
		Unfavorable	---	Common snowberry	10	
				Creambush oceanspray	10	
				Elderberry	10	
				Redosier dogwood	10	
				Idaho fescue	5	
				Cascade Oregongrape	5	
				Currant	5	
				Elk sedge	5	
				Pinegrass	5	
				Western yarrow	5	
				White spirea	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
188:						
Morical---------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
189:						
Morical---------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
190:						
Morical---------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
191:						
Morical---------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
Dragoon---------	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Idaho fescue	35	
		Normal	---	Bluebunch wheatgrass	10	
		Unfavorable	---	Pinegrass	10	
				Other perennial forbs	8	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Common snowberry	5	
				Other shrubs	5	
				Other perennial grasses	4	
				Elk sedge	3	
				Needlegrass	3	
				Blue wildrye	2	
				Prairie Junegrass	2	
				Rose	2	
				Strawberry	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
192:						
Morical---------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
Dragoon---------	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Idaho fescue	35	
		Normal	---	Bluebunch wheatgrass	10	
		Unfavorable	---	Pinegrass	10	
				Other perennial forbs	8	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Common snowberry	5	
				Other shrubs	5	
				Other perennial grasses	4	
				Elk sedge	3	
				Needlegrass	3	
				Blue wildrye	2	
				Prairie Junegrass	2	
				Rose	2	
				Strawberry	1	
193:						
Morical---------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
Dragoon---------	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Idaho fescue	35	
		Normal	---	Bluebunch wheatgrass	10	
		Unfavorable	---	Pinegrass	10	
				Other perennial forbs	8	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Common snowberry	5	
				Other shrubs	5	
				Other perennial grasses	4	
				Elk sedge	3	
				Needlegrass	3	
				Blue wildrye	2	
				Prairie Junegrass	2	
				Rose	2	
				Strawberry	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
194:						
Morical---------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
Dragoon---------	Douglas-fir/common snowberry/bluebunch wheatgrass (CDS637)	Favorable	---	Idaho fescue	35	
		Normal	---	Bluebunch wheatgrass	10	
		Unfavorable	---	Pinegrass	10	
				Other perennial forbs	8	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Common snowberry	5	
				Other shrubs	5	
				Other perennial grasses	4	
				Elk sedge	3	
				Needlegrass	3	
				Blue wildrye	2	
				Prairie Junegrass	2	
				Rose	2	
				Strawberry	1	
195:						
Mountaineer-----	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Elk sedge	20	
		Normal	---	Pinegrass	20	
		Unfavorable	---	Creambush oceanspray	15	
				Silky lupine	10	
				White spirea	10	
				Common snowberry	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
196:						
Mountaineer-----	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Elk sedge	20	
		Normal	---	Pinegrass	20	
		Unfavorable	---	Creambush oceanspray	15	
				Silky lupine	10	
				White spirea	10	
				Common snowberry	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
Rock outcrop.						
197:						
Mountaineer-----	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Elk sedge	20	
		Normal	---	Pinegrass	20	
		Unfavorable	---	Creambush oceanspray	15	
				Silky lupine	10	
				White spirea	10	
				Common snowberry	5	
				Myrtle pachistima	5	
				Other annual forbs	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
197:						
Tillicum--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Cascade Oregongrape	20	
		Normal	---	Whiteveined shinleaf	15	
		Unfavorable	---	Pinegrass	10	
				Silky lupine	10	
				Thimbleberry	10	
				Rocky Mountain maple	5	
				Heartleaf arnica	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Rose	5	
				Western rattlesnake plantain	5	
Rock outcrop.						
198:						
Nahahum---------	Douglas-fir/bitterbrush/ pinegrass (CDS675)	Favorable	---	Elk sedge	25	
		Normal	---	Rose	15	
		Unfavorable	---	Antelope bitterbrush	5	
				Creambush oceanspray	5	
				Low Oregongrape	5	
				Pinegrass	5	
				Silky lupine	5	
				White spirea	5	
				Scouler's willow	2	
199:						
Nahahum---------	Douglas-fir/bitterbrush/ pinegrass (CDS675)	Favorable	---	Elk sedge	25	
		Normal	---	Rose	15	
		Unfavorable	---	Antelope bitterbrush	5	
				Creambush oceanspray	5	
				Low Oregongrape	5	
				Pinegrass	5	
				Silky lupine	5	
				White spirea	5	
				Scouler's willow	2	
Taneum----------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
200:						
Nard-----------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Elk sedge	15	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Common snowberry	10	
				Low Oregongrape	10	
				Pinemat manzanita	10	
				Rose	10	
				Creambush oceanspray	5	
				Lupine	5	
				Myrtle pachistima	5	
				Serviceberry	5	
				Snowbrush ceanothus	5	
				White spirea	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
201:						
Nard------------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Elk sedge	15	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Common snowberry	10	
				Low Oregongrape	10	
				Pinemat manzanita	10	
				Rose	10	
				Creambush oceanspray	5	
				Lupine	5	
				Myrtle pachistima	5	
				Serviceberry	5	
				Snowbrush ceanothus	5	
				White spirea	5	
202:						
Nard------------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Elk sedge	15	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Common snowberry	10	
				Low Oregongrape	10	
				Pinemat manzanita	10	
				Rose	10	
				Creambush oceanspray	5	
				Lupine	5	
				Myrtle pachistima	5	
				Serviceberry	5	
				Snowbrush ceanothus	5	
				White spirea	5	
Blag------------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	75	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Sandberg bluegrass	5	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Thurber needlegrass	1	
				Biscuitroot	1	
				Elk sedge	1	
				Lupine	1	
				Penstemon	1	
				Raceme pussytoes	1	
				Snow buckwheat	1	
				Tarweed	1	
				Western yarrow	1	
				White spirea	1	
203:						
Nard------------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Elk sedge	15	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Common snowberry	10	
				Low Oregongrape	10	
				Pinemat manzanita	10	
				Rose	10	
				Creambush oceanspray	5	
				Lupine	5	
				Myrtle pachistima	5	
				Serviceberry	5	
				Snowbrush ceanothus	5	
				White spirea	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
203:						
Brisky----------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Antelope bitterbrush	30	
		Normal	---	Bluebunch wheatgrass	15	
		Unfavorable	---	Pinegrass	10	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Elk sedge	5	
				Spreading dogbane	5	
				Stonecrop	5	
				Western yarrow	5	
204:						
Nardine---------	Douglas-fir/common snowberry/ pinegrass (COS638)	Favorable	---	Serviceberry	20	
		Normal	---	White spirea	15	
		Unfavorable	---	Scouler's willow	10	
				Hawthorn	10	
				Mulesears wyethia	10	
				Rose	10	
				Common snowberry	5	
205:						
Nardmont--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Other shrubs	15	
		Unfavorable	---	Vine maple	15	
				Other perennial forbs	10	
				Rocky Mountain maple	5	
				Elk sedge	5	
				Rose	5	
206:						
Nardmont--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Other shrubs	15	
		Unfavorable	---	Vine maple	15	
				Other perennial forbs	10	
				Rocky Mountain maple	5	
				Elk sedge	5	
				Rose	5	
207:						
Natapoc---------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Pinegrass	25	
		Normal	---	Common snowberry	10	
		Unfavorable	---	Low Oregongrape	10	
				Myrtle pachistima	10	
				Snowbrush ceanothus	10	
				White spirea	10	
				Arrowleaf balsamroot	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
208:						
Natapoc	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Pinegrass	25	
		Normal	---	Common snowberry	10	
		Unfavorable	---	Low Oregongrape	10	
				Myrtle pachistima	10	
				Snowbrush ceanothus	10	
				White spirea	10	
				Arrowleaf balsamroot	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Western yarrow	5	
209:						
Natapoc	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Pinegrass	25	
		Normal	---	Common snowberry	10	
		Unfavorable	---	Low Oregongrape	10	
				Myrtle pachistima	10	
				Snowbrush ceanothus	10	
				White spirea	10	
				Arrowleaf balsamroot	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Western yarrow	5	
Thow	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	15	
		Unfavorable	---	White spirea	15	
				Scouler's willow	5	
				Arrowleaf balsamroot	5	
				Creambush oceanspray	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Rose	5	
				Silky lupine	5	
				Western yarrow	5	
210:						
Naxing	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Elk sedge	20	
		Normal	---	Pinegrass	20	
		Unfavorable	---	Dwarf huckleberry	10	
				Other shrubs	10	
				Polemonium	10	
				Silky lupine	10	
				Arnica	5	
				Currant	5	
				Myrtle pachistima	5	
				Vetch	5	
211:						
Naxing	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Elk sedge	20	
		Normal	---	Pinegrass	20	
		Unfavorable	---	Dwarf huckleberry	10	
				Other shrubs	10	
				Polemonium	10	
				Silky lupine	10	
				Arnica	5	
				Currant	5	
				Myrtle pachistima	5	
				Vetch	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
212:						
Newbell---------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Low Oregongrape	10	
		Normal	---	Other perennial forbs	10	
		Unfavorable	---	Other shrubs	10	
				White spirea	10	
				Ceanothus	5	
				Common snowberry	5	
				Elk sedge	5	
				Myrtle pachistima	5	
				Other perennial grasses	5	
				Pinegrass	5	
213:						
Nimue-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	
214:						
Nimue-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	
215:						
Nimue-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	
Rock outcrop.						
216:						
Nimue-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	
Nimue, dry------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
217:						
Nimue, dry	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	
Nimue	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Rusty menziesia	25	
		Normal	---	Huckleberry	15	
		Unfavorable	---	Myrtle pachistima	15	
				Northern twinflower	10	
				Cascade Oregongrape	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Western teaberry	5	
Rock outcrop.						
218:						
Oldbutte	Ponderosa pine/bluebunch wheatgrass (CPG141)	Favorable	---	Idaho fescue	20	
		Normal	---	Bluebunch wheatgrass	20	
		Unfavorable	---	Common snowberry	20	
				Cherry	10	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Other annual forbs	5	
				Rose	5	
219:						
Oldbutte	Ponderosa pine/bluebunch wheatgrass (CPG141)	Favorable	---	Idaho fescue	20	
		Normal	---	Bluebunch wheatgrass	20	
		Unfavorable	---	Common snowberry	20	
				Cherry	10	
				Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Other annual forbs	5	
				Rose	5	
220:						
Palmich	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	40	
		Normal	---	White spirea	10	
		Unfavorable	---	Arrowleaf balsamroot	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other shrubs	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
221:						
Palmich	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	40	
		Normal	---	White spirea	10	
		Unfavorable	---	Arrowleaf balsamroot	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other shrubs	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	
222:						
Palmich	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	40	
		Normal	---	White spirea	10	
		Unfavorable	---	Arrowleaf balsamroot	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other shrubs	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	
223:						
Palmich	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	40	
		Normal	---	White spirea	10	
		Unfavorable	---	Arrowleaf balsamroot	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other shrubs	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	
McCree	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Arrowleaf balsamroot	25	
		Unfavorable	---	Antelope bitterbrush	10	
				Pinegrass	5	
				Prairie Junegrass	5	
				Silky lupine	5	
				Groundsel	3	
				Western yarrow	2	
224:						
Palmich	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	40	
		Normal	---	White spirea	10	
		Unfavorable	---	Arrowleaf balsamroot	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other shrubs	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
224:						
McCree----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Arrowleaf balsamroot	25	
		Unfavorable	---	Antelope bitterbrush	10	
				Pinegrass	5	
				Prairie Junegrass	5	
				Silky lupine	5	
				Groundsel	3	
				Western yarrow	2	
Rock outcrop.						
225:						
Palmich---------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	40	
		Normal	---	White spirea	10	
		Unfavorable	---	Arrowleaf balsamroot	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other shrubs	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	
Rock outcrop.						
226:						
Palmont---------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	25	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Baldhip rose	5	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Raceme pussytoes	5	
				Snowbrush ceanothus	5	
				Strawberry	5	
				Western rattlesnake plantain	5	
				White spirea	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
227:						
Palmont---------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	25	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Baldhip rose	5	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Raceme pussytoes	5	
				Snowbrush ceanothus	5	
				Strawberry	5	
				Western rattlesnake plantain	5	
				White spirea	5	
228:						
Palmont---------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	25	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Baldhip rose	5	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Raceme pussytoes	5	
				Snowbrush ceanothus	5	
				Strawberry	5	
				Western rattlesnake plantain	5	
				White spirea	5	
229:						
Palmont---------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	25	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Baldhip rose	5	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Raceme pussytoes	5	
				Snowbrush ceanothus	5	
				Strawberry	5	
				Western rattlesnake plantain	5	
				White spirea	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
230:						
Ramparter-------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Snowbrush ceanothus	20	
		Normal	---	Scouler's willow	10	
		Unfavorable	---	Hairy brackenfern	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Pinegrass	5	
				Prince's pine	5	
				Spreading dogbane	5	
				Whiteveined shinleaf	5	
231:						
Ramparter-------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	15	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Huckleberry	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Rose	5	
				Spreading dogbane	5	
				White spirea	5	
				Snowbrush ceanothus	2	
				Kinnikinnick	1	
232:						
Ramparter-------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	15	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Huckleberry	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Rose	5	
				Spreading dogbane	5	
				White spirea	5	
				Snowbrush ceanothus	2	
				Kinnikinnick	1	
233:						
Ramparter-------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	15	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Huckleberry	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Rose	5	
				Spreading dogbane	5	
				White spirea	5	
				Snowbrush ceanothus	2	
				Kinnikinnick	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
234:						
Ramparter-------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	15	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Blue huckleberry	5	
				Creambush oceanspray	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Penstemon	5	
				Prince's pine	5	
				Spreading dogbane	5	
				Western yarrow	5	
				White spirea	5	
				Snowbrush ceanothus	2	
				Rose	1	
235:						
Ramparter-------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	15	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Blue huckleberry	5	
				Creambush oceanspray	5	
				Kinnikinnick	5	
				Myrtle pachistima	5	
				Penstemon	5	
				Prince's pine	5	
				Spreading dogbane	5	
				Western yarrow	5	
				White spirea	5	
				Snowbrush ceanothus	2	
				Rose	1	
236:						
Ramparter-------	Douglas-fir/kinnikinnick (bearberry)/pinegrass (CDS655)	Favorable	---	Pinegrass	15	
		Normal	---	Saskatoon serviceberry	5	
		Unfavorable	---	Scouler's willow	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Huckleberry	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Rose	5	
				Spreading dogbane	5	
				White spirea	5	
				Snowbrush ceanothus	2	
				Kinnikinnick	1	
Wilma----------	Douglas-fir/pachistima/pinegrass (CDS412)	Favorable	---	Snowbrush ceanothus	25	
		Normal	---	Elk sedge	10	
		Unfavorable	---	Myrtle pachistima	10	
				Saskatoon serviceberry	5	
				Scouler's willow	5	
				Bluebunch wheatgrass	5	
				Penstemon	5	
				Pinegrass	5	
				Rose	5	
				Slender hawkweed	5	
				Spreading dogbane	5	
				Western yarrow	5	
				Whiteveined shinleaf	5	
				Wyoming big sagebrush	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
237:						
Reggad----------	---	Favorable	---	Sitka alder	30	
		Normal	---	Vine maple	25	
		Unfavorable	---	Oval-leaf blueberry	10	
				Devilsclub	5	
				Western swordfern	5	
238:						
Reggad----------	---	Favorable	---	Sitka alder	30	
		Normal	---	Vine maple	25	
		Unfavorable	---	Oval-leaf blueberry	10	
				Devilsclub	5	
				Western swordfern	5	
Serene----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	40	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Oval-leaf blueberry	10	
				Trailing blackberry	5	
				Vine maple	5	
				Western rattlesnake plantain	1	
239.						
Rock outcrop						
240:						
Rock outcrop.						
Blewett---------	Grand fir/pinegrass (CWG124)	Favorable	---	Elk sedge	25	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Bluebunch wheatgrass	10	
				White spirea	10	
				Arrowleaf balsamroot	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other perennial grasses	5	
				Other shrubs	5	
				Pinegrass	5	
				Rose	5	
				Western yarrow	5	
241:						
Rock outcrop.						
Borland---------	Dry Stony 15+ PZ (R006XY201WA)	Favorable	600	Bluebunch wheatgrass		20
		Normal	500	Idaho fescue		19
		Unfavorable	400	Sandberg bluegrass		13
				Carey's balsamroot		9
				Bottlebrush squirreltail		9
				Hood's phlox		8
				Buckwheat		6
				Common yarrow		6
				Longleaf phlox		5
				Phacelia		3
				Slenderbush eriogonum		2
				Threetip sagebrush		2

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
242:						
Rock outcrop.						
Chumstick-------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	20	
		Normal	---	Lupine	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Elk sedge	10	
				Idaho fescue	5	
				Rose	5	
				Snowbrush ceanothus	5	
				Spreading dogbane	5	
				Western yarrow	5	
Icicle----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Elk sedge	10	
				Rocky Mountain maple	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Snowbrush ceanothus	5	
				White spirea	5	
				Rose	4	
				American trailplant	1	
				Oregon fairybells	1	
				Tall Oregongrape	1	
				Common snowberry	0	
243:						
Rock outcrop.						
Chumstick-------	Douglas-fir/pinegrass (CDG131)	Favorable	---	Pinegrass	20	
		Normal	---	Lupine	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Elk sedge	10	
				Idaho fescue	5	
				Rose	5	
				Snowbrush ceanothus	5	
				Spreading dogbane	5	
				Western yarrow	5	
Icicle----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Elk sedge	10	
				Rocky Mountain maple	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Snowbrush ceanothus	5	
				White spirea	5	
				Rose	4	
				American trailplant	1	
				Oregon fairybells	1	
				Tall Oregongrape	1	
				Common snowberry	0	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
244.						
Rock outcrop						
Rubble land						
Glaciers, snowfields						
245:						
Rock outcrop.						
Rubble land.						
Serene----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	40	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Oval-leaf blueberry	10	
				Trailing blackberry	5	
				Vine maple	5	
				Western rattlesnake plantain	1	
246.						
Rubble land						
Rock outcrop						
247:						
Safety----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Antelope bitterbrush	20	
		Normal	---	Bluebunch wheatgrass	20	
		Unfavorable	---	Snowbrush ceanothus	20	
				Idaho fescue	5	
				Arrowleaf balsamroot	5	
				Bluegrass	5	
				Silky lupine	5	
				Western yarrow	5	
				Currant	3	
				Saskatoon serviceberry	2	
				Common snowberry	1	
				Dogbane	1	
				Kinnikinnick	1	
				Minerslettuce	1	
248:						
Safety----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Antelope bitterbrush	20	
		Normal	---	Bluebunch wheatgrass	20	
		Unfavorable	---	Snowbrush ceanothus	20	
				Idaho fescue	5	
				Arrowleaf balsamroot	5	
				Bluegrass	5	
				Silky lupine	5	
				Western yarrow	5	
				Currant	3	
				Saskatoon serviceberry	2	
				Common snowberry	1	
				Dogbane	1	
				Kinnikinnick	1	
				Minerslettuce	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
249:						
Safety----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Antelope bitterbrush	20	
		Normal	---	Bluebunch wheatgrass	20	
		Unfavorable	---	Snowbrush ceanothus	20	
				Idaho fescue	5	
				Arrowleaf balsamroot	5	
				Bluegrass	5	
				Silky lupine	5	
				Western yarrow	5	
				Currant	3	
				Saskatoon serviceberry	2	
				Common snowberry	1	
				Dogbane	1	
				Kinnikinnick	1	
				Minerslettuce	1	
250:						
Safety----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Antelope bitterbrush	20	
		Normal	---	Bluebunch wheatgrass	20	
		Unfavorable	---	Snowbrush ceanothus	20	
				Idaho fescue	5	
				Arrowleaf balsamroot	5	
				Bluegrass	5	
				Silky lupine	5	
				Western yarrow	5	
				Currant	3	
				Saskatoon serviceberry	2	
				Common snowberry	1	
				Dogbane	1	
				Kinnikinnick	1	
				Minerslettuce	1	
Rock outcrop.						
251:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
252:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
253:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	15	
		Unfavorable	---	Rose	15	
				Saskatoon serviceberry	5	
				Blue huckleberry	5	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				White spirea	5	
254:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	15	
		Unfavorable	---	Rose	15	
				Saskatoon serviceberry	5	
				Blue huckleberry	5	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				White spirea	5	
255:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
256:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
257:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
Rock outcrop.						
258:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
Saska, bouldery	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
259:						
Saska, south----	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	15	
		Unfavorable	---	Rose	15	
				Saskatoon serviceberry	5	
				Blue huckleberry	5	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				White spirea	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
259:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
260:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
Saska, bouldery	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
261:						
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
261:						
Saska, bouldery	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
Rock outcrop.						
262:						
Saska, south----	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	15	
		Unfavorable	---	Rose	15	
				Saskatoon serviceberry	5	
				Blue huckleberry	5	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				White spirea	5	
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
Rock outcrop.						
263:						
Saydab----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Sagebrush	20	
		Normal	---	Currant	15	
		Unfavorable	---	Dwarf huckleberry	15	
				Elk sedge	15	
				Vetch	15	
				Western yarrow	15	
				Bluebunch wheatgrass	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
264:						
Scotties	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rose	25	
		Normal	---	Cascade Oregongrape	20	
		Unfavorable	---	Saskatoon serviceberry	10	
				Myrtle pachistima	10	
				Elk sedge	5	
				Hairgrass	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Prince's pine	5	
				White spirea	5	
				Heartleaf arnica	1	
265:						
Serene	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	40	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Oval-leaf blueberry	10	
				Trailing blackberry	5	
				Vine maple	5	
				Western rattlesnake plantain	1	
266:						
Serene	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	40	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Hairy brackenfern	10	
				Oval-leaf blueberry	10	
				Trailing blackberry	5	
				Vine maple	5	
				Western rattlesnake plantain	1	
Rock outcrop.						
267:						
Serpen	Douglas-fir/pinegrass-bluebunch wheatgrass (CDG134)	Favorable	---	Bluebunch wheatgrass	35	
		Normal	---	Elk sedge	15	
		Unfavorable	---	Lupine	5	
				Oceanspray	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Pinegrass	5	
				Spreading dogbane	5	
				Western yarrow	5	
268:						
Serpen	Douglas-fir/pinegrass-bluebunch wheatgrass (CDG134)	Favorable	---	Bluebunch wheatgrass	35	
		Normal	---	Elk sedge	15	
		Unfavorable	---	Lupine	5	
				Oceanspray	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Pinegrass	5	
				Spreading dogbane	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
269:						
Shadypass-------	Subalpine fir/dwarf huckleberry	Favorable	---	Dwarf huckleberry	20	
	(CES422)	Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Pinegrass	10	
				Pinemat manzanita	10	
				Ceanothus	5	
				Elk sedge	5	
				Prince's pine	5	
				Silky lupine	5	
				Willow	5	
270:						
Shamel----------	Ponderosa pine/bluebunch	Favorable	---	Saskatoon serviceberry	15	
	wheatgrass (CPG141)	Normal	---	Elk sedge	15	
		Unfavorable	---	Pinegrass	15	
				Arrowleaf balsamroot	5	
				Baldhip rose	5	
				Bluebunch wheatgrass	5	
				Common snowberry	5	
				Oceanspray	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Other shrubs	5	
				Silky lupine	5	
				Western yarrow	5	
				White spirea	5	
271:						
Shamel----------	Ponderosa pine/bluebunch	Favorable	---	Saskatoon serviceberry	15	
	wheatgrass (CPG141)	Normal	---	Elk sedge	15	
		Unfavorable	---	Pinegrass	15	
				Arrowleaf balsamroot	5	
				Baldhip rose	5	
				Bluebunch wheatgrass	5	
				Common snowberry	5	
				Oceanspray	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Other shrubs	5	
				Silky lupine	5	
				Western yarrow	5	
				White spirea	5	
272:						
Shamel----------	Ponderosa pine/bluebunch	Favorable	---	Saskatoon serviceberry	15	
	wheatgrass (CPG141)	Normal	---	Elk sedge	15	
		Unfavorable	---	Pinegrass	15	
				Arrowleaf balsamroot	5	
				Baldhip rose	5	
				Bluebunch wheatgrass	5	
				Common snowberry	5	
				Oceanspray	5	
				Other perennial forbs	5	
				Other perennial grasses	5	
				Other shrubs	5	
				Silky lupine	5	
				Western yarrow	5	
				White spirea	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
273:						
Shaser----------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Elk sedge	15	
		Normal	---	Common snowberry	10	
		Unfavorable	---	Creambush oceanspray	10	
				Pinegrass	10	
				Rose	10	
				Snowbrush ceanothus	10	
				Willow	10	
				Rocky Mountain maple	5	
				Aster	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				White spirea	5	
Blewett---------	Grand fir/pinegrass (CWG124)	Favorable	---	Elk sedge	25	
		Normal	---	Antelope bitterbrush	10	
		Unfavorable	---	Bluebunch wheatgrass	10	
				White spirea	10	
				Arrowleaf balsamroot	5	
				Myrtle pachistima	5	
				Other annual forbs	5	
				Other perennial grasses	5	
				Other shrubs	5	
				Pinegrass	5	
				Rose	5	
				Western yarrow	5	
274:						
Shaser----------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Elk sedge	15	
		Normal	---	Common snowberry	10	
		Unfavorable	---	Creambush oceanspray	10	
				Pinegrass	10	
				Rose	10	
				Snowbrush ceanothus	10	
				Willow	10	
				Rocky Mountain maple	5	
				Aster	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				White spirea	5	
Brisky----------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Antelope bitterbrush	30	
		Normal	---	Bluebunch wheatgrass	15	
		Unfavorable	---	Pinegrass	10	
				Arrowleaf balsamroot	5	
				Big sagebrush	5	
				Elk sedge	5	
				Spreading dogbane	5	
				Stonecrop	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
275:						
Shaser----------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Elk sedge	15	
		Normal	---	Common snowberry	10	
		Unfavorable	---	Creambush oceanspray	10	
				Pinegrass	10	
				Rose	10	
				Snowbrush ceanothus	10	
				Willow	10	
				Rocky Mountain maple	5	
				Aster	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				White spirea	5	
Chapot----------	Grand fir/common snowberry/pinegrass (CWS336)	Favorable	---	Pinegrass	20	
		Normal	---	Scouler's willow	10	
		Unfavorable	---	Myrtle pachistima	10	
				White spirea	10	
				Cascade Oregongrape	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Prince's pine	5	
				Snowbrush ceanothus	5	
				Rose	2	
276:						
Skipeak---------	Grand fir/Cascade Oregongrape (CWG225)	Favorable	---	Dwarf huckleberry	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Longtube twinflower	10	
				Western teaberry	10	
				Saskatoon serviceberry	5	
				Scouler's willow	5	
				Cascade Oregongrape	5	
				Rose	5	
				White spirea	5	
				Western brackenfern	3	
				Queencup beadlily	2	
277:						
Skipeak---------	Grand fir/Cascade Oregongrape (CWG225)	Favorable	---	Dwarf huckleberry	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Longtube twinflower	10	
				Western teaberry	10	
				Saskatoon serviceberry	5	
				Scouler's willow	5	
				Cascade Oregongrape	5	
				Rose	5	
				White spirea	5	
				Western brackenfern	3	
				Queencup beadlily	2	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
277:						
Line------------	Western hemlock/pinemat manzanita (CHS144)	Favorable	---	Dwarf huckleberry	20	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Pinemat manzanita	10	
				Prince's pine	10	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Longtube twinflower	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
				Western teaberry	5	
				Western brackenfern	1	
278:						
Soda------------	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	
279:						
Soda------------	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	
280:						
Soda------------	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
281:						
Soda------------	Subalpine fir/Cascade azalea	Favorable	---	Cascade Oregongrape	15	
	(CES211)	Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Prince's pine	15	
				Hairy brackenfern	10	
				Rocky Mountain maple	5	
				Dwarf huckleberry	5	
				Longtube twinflower	5	
				Rose	5	
				Western rattlesnake plantain	5	
282:						
Soda------------	Subalpine fir/Cascade azalea	Favorable	---	Cascade Oregongrape	15	
	(CES211)	Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Prince's pine	15	
				Hairy brackenfern	10	
				Rocky Mountain maple	5	
				Dwarf huckleberry	5	
				Longtube twinflower	5	
				Rose	5	
				Western rattlesnake plantain	5	
283:						
Soda------------	Subalpine fir/Cascade azalea	Favorable	---	Cascade Oregongrape	15	
	(CES211)	Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Prince's pine	15	
				Hairy brackenfern	10	
				Rocky Mountain maple	5	
				Dwarf huckleberry	5	
				Longtube twinflower	5	
				Rose	5	
				Western rattlesnake plantain	5	
Rock outcrop.						
284:						
Soda------------	Subalpine fir/Cascade azalea	Favorable	---	Huckleberry	20	
	(CES211)	Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
285:						
Soda	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	
Soda, cold	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	
286:						
Soda	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	
Soda, cold	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
287:						
Soda	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	
Soda, cold	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade azalea	10	
				Lupine	10	
				Sidebells shinleaf	10	
				Western rattlesnake plantain	10	
				Cascade Oregongrape	5	
				Grouse blueberry	5	
				Pinegrass	5	
				Prince's pine	5	
				Western teaberry	5	
				Whiteveined shinleaf	5	
Rock outcrop.						
288:						
Sodacreek	Grand fir/vine maple/queencup beadlily (CWS553)	Favorable	---	Myrtle pachistima	25	
		Normal	---	Vine maple	25	
		Unfavorable	---	Cascade Oregongrape	10	
				Willow	10	
				Queencup beadlily	5	
				Western brackenfern	5	
				Western teaberry	5	
				Prince's pine	1	
				Rose	1	
				Starry false Solomon's seal	1	
				Western rattlesnake plantain	1	
289:						
Sodacreek	Grand fir/vine maple/queencup beadlily (CWS553)	Favorable	---	Myrtle pachistima	25	
		Normal	---	Vine maple	25	
		Unfavorable	---	Cascade Oregongrape	10	
				Willow	10	
				Queencup beadlily	5	
				Western brackenfern	5	
				Western teaberry	5	
				Prince's pine	1	
				Rose	1	
				Starry false Solomon's seal	1	
				Western rattlesnake plantain	1	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
290:						
Spodic Vitrixerands---	Western hemlock/Cascade Oregongrape (CHS142)	Favorable	---	White spirea	15	
		Normal	---	Rocky Mountain maple	10	
		Unfavorable	---	Scouler's willow	10	
				Prince's pine	10	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Hairy brackenfern	5	
				Huckleberry	5	
				Longtube twinflower	5	
				Myrtle pachistima	5	
				Pinegrass	5	
				Rose	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
291:						
Spodic Vitrixerands---	Western hemlock/Cascade Oregongrape (CHS142)	Favorable	---	White spirea	15	
		Normal	---	Rocky Mountain maple	10	
		Unfavorable	---	Scouler's willow	10	
				Prince's pine	10	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Hairy brackenfern	5	
				Huckleberry	5	
				Longtube twinflower	5	
				Myrtle pachistima	5	
				Pinegrass	5	
				Rose	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
Saska-----------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Pinegrass	15	
		Normal	---	Spirea	15	
		Unfavorable	---	Rocky Mountain maple	5	
				Cascade Oregongrape	5	
				Creambush oceanspray	5	
				Hairy brackenfern	5	
				Myrtle pachistima	5	
				Northern twinflower	5	
				Starry false Solomon's seal	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
292:						
Stemilt---------	Douglas-fir/bitterbrush/ pinegrass (CDS675)	Favorable	---	Pinegrass	40	
		Normal	---	Elk sedge	25	
		Unfavorable	---	Arrowleaf balsamroot	15	
				Heartleaf arnica	5	
				Lupine	5	
				Antelope bitterbrush	3	
				Rose	1	
				Western yarrow	1	
293:						
Stemilt---------	Douglas-fir/bitterbrush/ pinegrass (CDS675)	Favorable	---	Pinegrass	40	
		Normal	---	Elk sedge	25	
		Unfavorable	---	Arrowleaf balsamroot	15	
				Heartleaf arnica	5	
				Lupine	5	
				Antelope bitterbrush	3	
				Rose	1	
				Western yarrow	1	
294:						
Surgh----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Myrtle pachistima	20	
		Normal	---	Dwarf huckleberry	10	
		Unfavorable	---	Western rattlesnake plantain	10	
				White spirea	10	
				Elk sedge	5	
				Heartleaf arnica	5	
				Lupine	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Mallow ninebark	1	
295:						
Surgh----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Myrtle pachistima	20	
		Normal	---	Dwarf huckleberry	10	
		Unfavorable	---	Western rattlesnake plantain	10	
				White spirea	10	
				Elk sedge	5	
				Heartleaf arnica	5	
				Lupine	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Mallow ninebark	1	
296:						
Surgh----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Myrtle pachistima	20	
		Normal	---	Dwarf huckleberry	10	
		Unfavorable	---	Western rattlesnake plantain	10	
				White spirea	10	
				Elk sedge	5	
				Heartleaf arnica	5	
				Lupine	5	
				Pinegrass	5	
				Prince's pine	5	
				Sidebells shinleaf	5	
				Mallow ninebark	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
297:						
Surgh-----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Cascade Oregongrape	10	
				Prince's pine	10	
				Queencup beadlily	10	
				Whiteveined shinleaf	10	
				Longtube twinflower	5	
				Western rattlesnake plantain	5	
Wedge-----------	Pacific silver fir/Cascade azalea-blue (big) huckleberry (CFS556)	Favorable	---	Huckleberry	15	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Myrtle pachistima	10	
				Other perennial forbs	10	
				Cascade azalea	5	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Thimbleberry	5	
				Western teaberry	5	
298:						
Swakane---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
299:						
Swakane---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
300:						
Swakane---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
Rock outcrop.						
301:						
Swakane---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
Rock outcrop.						
302:						
Switchback------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Elk sedge	20	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Common snowberry	10	
				Lupine	10	
				Saskatoon serviceberry	5	
				Antelope bitterbrush	5	
				Bluebunch wheatgrass	5	
				Low Oregongrape	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	
				White spirea	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
303:						
Switchback------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Elk sedge	20	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Common snowberry	10	
				Lupine	10	
				Saskatoon serviceberry	5	
				Antelope bitterbrush	5	
				Bluebunch wheatgrass	5	
				Low Oregongrape	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	
				White spirea	5	
304:						
Switchback------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Elk sedge	20	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Arrowleaf balsamroot	10	
				Common snowberry	10	
				Lupine	10	
				Saskatoon serviceberry	5	
				Antelope bitterbrush	5	
				Bluebunch wheatgrass	5	
				Low Oregongrape	5	
				Snowbrush ceanothus	5	
				Western yarrow	5	
				White spirea	5	
305:						
Taneum----------	Loamy 15+ PZ (R006XY102WA)	Favorable	1,500	Idaho fescue		52
		Normal	1,300	Bluebunch wheatgrass		25
		Unfavorable	1,100	Silvery lupine		10
				Wyeth buckwheat		3
				Longleaf phlox		3
				Big sagebrush		2
				Gray rabbitbrush		2
				Green rabbitbrush		2
				Threetip sagebrush		2
306:						
Thow------------	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	15	
		Unfavorable	---	White spirea	15	
				Scouler's willow	5	
				Arrowleaf balsamroot	5	
				Creambush oceanspray	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Rose	5	
				Silky lupine	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
307:						
Thow------------	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	15	
		Unfavorable	---	White spirea	15	
				Scouler's willow	5	
				Arrowleaf balsamroot	5	
				Creambush oceanspray	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Rose	5	
				Silky lupine	5	
				Western yarrow	5	
308:						
Thow------------	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	15	
		Unfavorable	---	White spirea	15	
				Scouler's willow	5	
				Arrowleaf balsamroot	5	
				Creambush oceanspray	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Rose	5	
				Silky lupine	5	
				Western yarrow	5	
309:						
Thow------------	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	15	
		Unfavorable	---	White spirea	15	
				Scouler's willow	5	
				Arrowleaf balsamroot	5	
				Creambush oceanspray	5	
				Low Oregongrape	5	
				Myrtle pachistima	5	
				Rose	5	
				Silky lupine	5	
				Western yarrow	5	
Domkey----------	Grand fir/pinemat manzanita (CWS338)	Favorable	---	Pinegrass	20	
		Normal	---	Saskatoon serviceberry	10	
		Unfavorable	---	Creambush oceanspray	10	
				Willow	10	
				Indian paintbrush	5	
				Blue huckleberry	5	
				Heartleaf arnica	5	
				Kinnikinnick	5	
				Lupine	5	
				Pinemat manzanita	5	
				Western rattlesnake plantain	5	
				Western yarrow	5	
				White spirea	5	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
310:						
Thowson---------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Antelope bitterbrush	25	
		Normal	---	Pinegrass	25	
		Unfavorable	---	Bluebunch wheatgrass	15	
				Arrowleaf balsamroot	10	
				Silky lupine	10	
				Scouler's willow	1	
				Common chokecherry	1	
				Common snowberry	1	
				Currant	1	
				Rose	1	
				Western yarrow	1	
				White spirea	1	
311:						
Thowson---------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Antelope bitterbrush	25	
		Normal	---	Pinegrass	25	
		Unfavorable	---	Bluebunch wheatgrass	15	
				Arrowleaf balsamroot	10	
				Silky lupine	10	
				Scouler's willow	1	
				Common chokecherry	1	
				Common snowberry	1	
				Currant	1	
				Rose	1	
				Western yarrow	1	
				White spirea	1	
312:						
Thowson---------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Antelope bitterbrush	25	
		Normal	---	Pinegrass	25	
		Unfavorable	---	Bluebunch wheatgrass	15	
				Arrowleaf balsamroot	10	
				Silky lupine	10	
				Scouler's willow	1	
				Common chokecherry	1	
				Common snowberry	1	
				Currant	1	
				Rose	1	
				Western yarrow	1	
				White spirea	1	
313:						
Thowson---------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Antelope bitterbrush	25	
		Normal	---	Pinegrass	25	
		Unfavorable	---	Bluebunch wheatgrass	15	
				Arrowleaf balsamroot	10	
				Silky lupine	10	
				Scouler's willow	1	
				Common chokecherry	1	
				Common snowberry	1	
				Currant	1	
				Rose	1	
				Western yarrow	1	
				White spirea	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
314:						
Thowson	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Pinegrass	30	
		Unfavorable	---	Antelope bitterbrush	10	
				Bluegrass	10	
				Arrowleaf balsamroot	5	
				Snowbrush ceanothus	5	
				Lewis' mockorange	1	
				Saskatoon serviceberry	1	
				Currant	1	
				Phlox	1	
				Rose	1	
				Silky lupine	1	
				Tall Oregongrape	1	
				Western yarrow	1	
				White spirea	1	
315:						
Thowson	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Pinegrass	30	
		Unfavorable	---	Antelope bitterbrush	10	
				Bluegrass	10	
				Arrowleaf balsamroot	5	
				Snowbrush ceanothus	5	
				Lewis' mockorange	1	
				Saskatoon serviceberry	1	
				Currant	1	
				Phlox	1	
				Rose	1	
				Silky lupine	1	
				Tall Oregongrape	1	
				Western yarrow	1	
				White spirea	1	
Rock outcrop.						
316:						
Thowson	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Pinegrass	30	
		Unfavorable	---	Antelope bitterbrush	10	
				Bluegrass	10	
				Arrowleaf balsamroot	5	
				Snowbrush ceanothus	5	
				Lewis' mockorange	1	
				Saskatoon serviceberry	1	
				Currant	1	
				Phlox	1	
				Rose	1	
				Silky lupine	1	
				Tall Oregongrape	1	
				Western yarrow	1	
				White spirea	1	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
317:						
Thowson---------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Pinegrass	30	
		Unfavorable	---	Antelope bitterbrush	10	
				Bluegrass	10	
				Arrowleaf balsamroot	5	
				Snowbrush ceanothus	5	
				Lewis' mockorange	1	
				Saskatoon serviceberry	1	
				Currant	1	
				Phlox	1	
				Rose	1	
				Silky lupine	1	
				Tall Oregongrape	1	
				Western yarrow	1	
				White spirea	1	
Rock outcrop.						
318:						
Thowson, stony--	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Bluebunch wheatgrass	30	
		Normal	---	Pinegrass	30	
		Unfavorable	---	Antelope bitterbrush	10	
				Bluegrass	10	
				Arrowleaf balsamroot	5	
				Snowbrush ceanothus	5	
				Lewis' mockorange	1	
				Saskatoon serviceberry	1	
				Currant	1	
				Phlox	1	
				Rose	1	
				Silky lupine	1	
				Tall Oregongrape	1	
				Western yarrow	1	
				White spirea	1	
Thowson---------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Antelope bitterbrush	25	
		Normal	---	Pinegrass	25	
		Unfavorable	---	Bluebunch wheatgrass	15	
				Arrowleaf balsamroot	10	
				Silky lupine	10	
				Scouler's willow	1	
				Common chokecherry	1	
				Common snowberry	1	
				Currant	1	
				Rose	1	
				Western yarrow	1	
				White spirea	1	
Rock outcrop.						

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
319:						
Tillicum--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Cascade Oregongrape	20	
		Normal	---	Whiteveined shinleaf	15	
		Unfavorable	---	Pinegrass	10	
				Silky lupine	10	
				Thimbleberry	10	
				Rocky Mountain maple	5	
				Heartleaf arnica	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Rose	5	
				Western rattlesnake plantain	5	
320:						
Tillicum--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Cascade Oregongrape	20	
		Normal	---	Whiteveined shinleaf	15	
		Unfavorable	---	Pinegrass	10	
				Silky lupine	10	
				Thimbleberry	10	
				Rocky Mountain maple	5	
				Heartleaf arnica	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Rose	5	
				Western rattlesnake plantain	5	
321:						
Tillicum--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Cascade Oregongrape	20	
		Normal	---	Whiteveined shinleaf	15	
		Unfavorable	---	Pinegrass	10	
				Silky lupine	10	
				Thimbleberry	10	
				Rocky Mountain maple	5	
				Heartleaf arnica	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Rose	5	
				Western rattlesnake plantain	5	
322:						
Tillmont--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rocky Mountain maple	25	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Rose	15	
				Cascade Oregongrape	5	
				Grand fir	5	
				Hairy brackenfern	5	
				Heartleaf arnica	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Twistedstalk	5	
				White spirea	5	
				Whiteveined shinleaf	2	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
323:						
Tillmont--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rocky Mountain maple	25	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Rose	15	
				Cascade Oregongrape	5	
				Grand fir	5	
				Hairy brackenfern	5	
				Heartleaf arnica	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Twistedstalk	5	
				White spirea	5	
				Whiteveined shinleaf	2	
324:						
Tillmont--------	Grand fir/Cascade Oregongrape/pinegrass (CWS226)	Favorable	---	Rocky Mountain maple	25	
		Normal	---	Pinegrass	15	
		Unfavorable	---	Rose	15	
				Cascade Oregongrape	5	
				Grand fir	5	
				Hairy brackenfern	5	
				Heartleaf arnica	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Twistedstalk	5	
				White spirea	5	
				Whiteveined shinleaf	2	
Inkler----------	Grand fir/oceanspray/pinegrass (CWS554)	Favorable	---	Spirea	35	
		Normal	---	Rose	15	
		Unfavorable	---	Elk sedge	10	
				Rocky Mountain maple	5	
				Little prince's pine	5	
				Myrtle pachistima	5	
				Oceanspray	5	
				Pinegrass	5	
				Serviceberry	5	
				Western rattlesnake plantain	5	
325:						
Tiptop----------	Subalpine fir/grouse blueberry (huckleberry)/pinegrass (CES413)	Favorable	---	Elk sedge	15	
		Normal	---	Grouse blueberry	15	
		Unfavorable	---	Silky lupine	15	
				Myrtle pachistima	10	
				Polemonium	10	
				Deerfoot vanillaleaf	5	
				Pinegrass	5	
				Prince's pine	5	
				Valerian	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
				Cascade Oregongrape	1	
				Raceme pussytoes	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
326:						
Tiptop----------	Subalpine fir/grouse blueberry (huckleberry)/pinegrass (CES413)	Favorable	---	Elk sedge	15	
		Normal	---	Grouse blueberry	15	
		Unfavorable	---	Silky lupine	15	
				Myrtle pachistima	10	
				Polemonium	10	
				Deerfoot vanillaleaf	5	
				Pinegrass	5	
				Prince's pine	5	
				Valerian	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
				Cascade Oregongrape	1	
				Raceme pussytoes	1	
Naxing----------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Elk sedge	20	
		Normal	---	Pinegrass	20	
		Unfavorable	---	Dwarf huckleberry	10	
				Other shrubs	10	
				Polemonium	10	
				Silky lupine	10	
				Arnica	5	
				Currant	5	
				Myrtle pachistima	5	
				Vetch	5	
327:						
Totem-----------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Myrtle pachistima	20	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Cascade Oregongrape	10	
				Hairy brackenfern	10	
				Prince's pine	10	
				Longtube twinflower	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
				Saskatoon serviceberry	2	
				Pyrola	1	
				Queencup beadlily	1	
				Serviceberry	1	
328:						
Totem-----------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Myrtle pachistima	20	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Cascade Oregongrape	10	
				Hairy brackenfern	10	
				Prince's pine	10	
				Longtube twinflower	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
				Saskatoon serviceberry	2	
				Pyrola	1	
				Queencup beadlily	1	
				Serviceberry	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
329:						
Totem-----------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Myrtle pachistima	20	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Cascade Oregongrape	10	
				Hairy brackenfern	10	
				Prince's pine	10	
				Longtube twinflower	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
				Saskatoon serviceberry	2	
				Pyrola	1	
				Queencup beadlily	1	
				Serviceberry	1	
330:						
Totem-----------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Myrtle pachistima	20	
		Normal	---	Blue huckleberry	10	
		Unfavorable	---	Cascade Oregongrape	10	
				Hairy brackenfern	10	
				Prince's pine	10	
				Longtube twinflower	5	
				Vine maple	5	
				Western rattlesnake plantain	5	
				Saskatoon serviceberry	2	
				Pyrola	1	
				Queencup beadlily	1	
				Serviceberry	1	
Chiwaukum-------	Douglas-fir/pachistima (CDS411)	Favorable	---	Blue huckleberry	20	
		Normal	---	Myrtle pachistima	20	
		Unfavorable	---	Cascade Oregongrape	10	
				Pinegrass	10	
				Pinemat manzanita	10	
				Rose	10	
				Lupine	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
				Whiteveined shinleaf	5	
331:						
Treen-----------	---	Favorable	900	Hairy brackenfern	20	
		Normal	800	Buckwheat	15	
		Unfavorable	700	Columbian lily	10	
				Lupine	10	
				Other annual forbs	10	
				Other perennial forbs	10	
				Sedge	10	
				Blue wildrye	5	
332:						
Treen-----------	---	Favorable	900	Hairy brackenfern	20	
		Normal	800	Buckwheat	15	
		Unfavorable	700	Columbian lily	10	
				Lupine	10	
				Other annual forbs	10	
				Other perennial forbs	10	
				Sedge	10	
				Blue wildrye	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
332:						
Klapatche-------	Western hemlock/Cascade Oregongrape (CHS142)	Favorable	---	Blue huckleberry	20	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Dwarf huckleberry	10	
				Western teaberry	10	
				Myrtle pachistima	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
				Rusty menziesia	3	
				Longtube twinflower	1	
333:						
Tronsen---------	Stony 9-15 PZ (R008XY202WA)	Favorable	750	Bluebunch wheatgrass		77
		Normal	600	Sandberg bluegrass		13
		Unfavorable	300	Other perennial forbs		6
				Wyoming big sagebrush		4
334:						
Tronsen---------	Stony 9-15 PZ (R008XY202WA)	Favorable	750	Bluebunch wheatgrass		77
		Normal	600	Sandberg bluegrass		13
		Unfavorable	300	Other perennial forbs		6
				Wyoming big sagebrush		4
335:						
Tyee------------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
336:						
Tyee------------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
337:						
Tyee------------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
338:						
Tyee------------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
Bisping---------	Ponderosa pine/ bitterbrush/ bluebunch wheatgrass (CPS241)	Favorable	---	Pinegrass	40	
		Normal	---	Bluebunch wheatgrass	15	
		Unfavorable	---	Elk sedge	10	
				Prairie Junegrass	10	
				Silky lupine	10	
				Antelope bitterbrush	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Snowbrush ceanothus	5	
339:						
Typic Cryaquands	---	Favorable	2,500	Widefoot sedge	40	
		Normal	2,000	Bog birch	5	
		Unfavorable	1,600	Sitka sedge	5	
				Beaked sedge	5	
				Baltic rush	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
340:						
Vabbing---------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Evergreen huckleberry	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Pyrola	5	
				Western teaberry	5	
				White spirea	5	
				Broadleaf starflower	1	
				Western swordfern	1	
341:						
Vabbing---------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Evergreen huckleberry	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Pyrola	5	
				Western teaberry	5	
				White spirea	5	
				Broadleaf starflower	1	
				Western swordfern	1	
342:						
Vabbing---------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Evergreen huckleberry	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Pyrola	5	
				Western teaberry	5	
				White spirea	5	
				Broadleaf starflower	1	
				Western swordfern	1	
Gilpar----------	Pacific silver fir/vine maple (CFS621)	Favorable	---	Dwarf huckleberry	35	
		Normal	---	Vine maple	20	
		Unfavorable	---	Myrtle pachistima	15	
				Cascade Oregongrape	5	
				Hairy brackenfern	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
343:						
Vabbing---------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Cascade Oregongrape	15	
		Normal	---	Myrtle pachistima	15	
		Unfavorable	---	Evergreen huckleberry	10	
				Rusty menziesia	10	
				Pacific yew	5	
				Longtube twinflower	5	
				Prince's pine	5	
				Pyrola	5	
				Western teaberry	5	
				White spirea	5	
				Broadleaf starflower	1	
				Western swordfern	1	
Rock outcrop.						
344:						
Vabus-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	25	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Blackberry	10	
				Low Oregongrape	10	
				Deerfoot vanillaleaf	5	
				Devilsclub	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Pyrola	5	
345:						
Vabus-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	25	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Blackberry	10	
				Low Oregongrape	10	
				Deerfoot vanillaleaf	5	
				Devilsclub	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Pyrola	5	
346:						
Vabus-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	25	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Blackberry	10	
				Low Oregongrape	10	
				Deerfoot vanillaleaf	5	
				Devilsclub	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Pyrola	5	
Chinkmin--------	Mountain hemlock/rusty menziesia-blue (big) huckleberry (CMS257)	Favorable	---	Cascade azalea	15	
		Normal	---	Blue huckleberry	15	
		Unfavorable	---	Rusty menziesia	10	
				Whortleberry	10	
				Bunchberry dogwood	5	
				Cascade Oregongrape	5	
				Northern twinflower	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Starry false Solomon's seal	5	
				Western teaberry	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

		Total production			Composition	
Map symbol and soil name	Ecological site or plant association	Kind of year	Dry Weight	Characteristic vegetation	Forest	Range
			Lb/acre		*Pct*	*Pct*
347:						
Vabus-----------	Pacific silver fir/rusty menziesia (rustyleaf) (CFS542)	Favorable	---	Blue huckleberry	25	
		Normal	---	Rusty menziesia	25	
		Unfavorable	---	Blackberry	10	
				Low Oregongrape	10	
				Deerfoot vanillaleaf	5	
				Devilsclub	5	
				Myrtle pachistima	5	
				Prince's pine	5	
				Pyrola	5	
Chinkmin--------	Mountain hemlock/rusty menziesia-blue (big) huckleberry (CMS257)	Favorable	---	Cascade azalea	15	
		Normal	---	Blue huckleberry	15	
		Unfavorable	---	Rusty menziesia	10	
				Whortleberry	10	
				Bunchberry dogwood	5	
				Cascade Oregongrape	5	
				Northern twinflower	5	
				Prince's pine	5	
				Queencup beadlily	5	
				Starry false Solomon's seal	5	
				Western teaberry	5	
348:						
Varelum---------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Pinegrass	25	
		Normal	---	Rose	10	
		Unfavorable	---	Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Low Oregongrape	5	
				Vetch	5	
				Western yarrow	5	
349:						
Varelum---------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Pinegrass	25	
		Normal	---	Rose	10	
		Unfavorable	---	Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Low Oregongrape	5	
				Vetch	5	
				Western yarrow	5	
350:						
Varelum---------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Pinegrass	25	
		Normal	---	Rose	10	
		Unfavorable	---	Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Low Oregongrape	5	
				Vetch	5	
				Western yarrow	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
351:						
Varelum---------	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Pinegrass	25	
		Normal	---	Rose	10	
		Unfavorable	---	Saskatoon serviceberry	5	
				Arrowleaf balsamroot	5	
				Common snowberry	5	
				Creambush oceanspray	5	
				Elk sedge	5	
				Heartleaf arnica	5	
				Low Oregongrape	5	
				Vetch	5	
				Western yarrow	5	
352:						
Vitricryands----	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Grouse blueberry	25	
		Normal	---	Lupine	10	
		Unfavorable	---	Pinegrass	10	
				Willow	10	
				Aster	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
				Polemonium	3	
				Whiteveined shinleaf	3	
				Sidebells shinleaf	2	
353:						
Vitricryands----	Douglas-fir/common snowberry/pinegrass (CDS638)	Favorable	---	Grouse blueberry	25	
		Normal	---	Lupine	10	
		Unfavorable	---	Pinegrass	10	
				Willow	10	
				Aster	5	
				Prince's pine	5	
				Western rattlesnake plantain	5	
				Polemonium	3	
				Whiteveined shinleaf	3	
				Sidebells shinleaf	2	
Rock outcrop.						
354:						
Wagberg---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	---	Bluebunch wheatgrass		89
		Normal	---	Wyoming big sagebrush		8
		Unfavorable	---	Threetip sagebrush		3
355:						
Wagberg---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	---	Bluebunch wheatgrass		89
		Normal	---	Wyoming big sagebrush		8
		Unfavorable	---	Threetip sagebrush		3
356:						
Wagberg---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	---	Bluebunch wheatgrass		89
		Normal	---	Wyoming big sagebrush		8
		Unfavorable	---	Threetip sagebrush		3
Wagberg, south--	Cool Stony 9-15 PZ (R008XY203WA)	Favorable	---	Idaho fescue		60
		Normal	---	Bluebunch wheatgrass		20
		Unfavorable	---	Cusick's bluegrass		5
				Sandberg bluegrass		5
				Lupine		3
				Prairie Junegrass		2

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
357:						
Wagberg---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	---	Bluebunch wheatgrass		89
		Normal	---	Wyoming big sagebrush		8
		Unfavorable	---	Threetip sagebrush		3
Swakane---------	Dry Stony 9-15 PZ (R008XY201WA)	Favorable	550	Bluebunch wheatgrass		89
		Normal	450	Wyoming big sagebrush		8
		Unfavorable	300	Threetip sagebrush		3
Rock outcrop.						
358:						
Wedge-----------	Pacific silver fir/Cascade azalea-blue (big) huckleberry (CFS556)	Favorable	---	Huckleberry	15	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Myrtle pachistima	10	
				Other perennial forbs	10	
				Cascade azalea	5	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Thimbleberry	5	
				Western teaberry	5	
359:						
Wedge-----------	Pacific silver fir/Cascade azalea-blue (big) huckleberry (CFS556)	Favorable	---	Huckleberry	15	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Myrtle pachistima	10	
				Other perennial forbs	10	
				Cascade azalea	5	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Thimbleberry	5	
				Western teaberry	5	
360:						
Wedge-----------	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	25	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Other perennial forbs	10	
				Cascade azalea	5	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Pinegrass	5	
				Pinemat manzanita	5	
361:						
Wedge-----------	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	25	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Other perennial forbs	10	
				Cascade azalea	5	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Pinegrass	5	
				Pinemat manzanita	5	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
362:						
Wedge-----------	Pacific silver fir/Cascade azalea-blue (big) huckleberry (CFS556)	Favorable	---	Huckleberry	15	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Myrtle pachistima	10	
				Other perennial forbs	10	
				Cascade azalea	5	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Thimbleberry	5	
				Western teaberry	5	
Typic Cryaquands	---	Favorable	2,500	Widefoot sedge	40	
		Normal	2,000	Bog birch	5	
		Unfavorable	1,600	Sitka sedge	5	
				Beaked sedge	5	
				Baltic rush	5	
363:						
Wedge-----------	Pacific silver fir/Cascade azalea-blue (big) huckleberry (CFS556)	Favorable	---	Huckleberry	15	
		Normal	---	Cascade Oregongrape	10	
		Unfavorable	---	Myrtle pachistima	10	
				Other perennial forbs	10	
				Cascade azalea	5	
				Longtube twinflower	5	
				Pinegrass	5	
				Prince's pine	5	
				Thimbleberry	5	
				Western teaberry	5	
Wedge, cold-----	Subalpine fir/Cascade azalea (CES211)	Favorable	---	Huckleberry	25	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Other perennial forbs	10	
				Cascade azalea	5	
				Cascade Oregongrape	5	
				Elk sedge	5	
				Pinegrass	5	
				Pinemat manzanita	5	
364:						
Wedgemont-------	Subalpine fir/dwarf huckleberry (CES422)	Favorable	---	Dwarf huckleberry	15	
		Normal	---	Myrtle pachistima	10	
		Unfavorable	---	Kinnikinnick	5	
				Sidebells shinleaf	5	
				Western rattlesnake plantain	5	
365:						
Wilma-----------	Douglas-fir/pachistima/pinegrass (CDS412)	Favorable	---	Snowbrush ceanothus	25	
		Normal	---	Elk sedge	10	
		Unfavorable	---	Myrtle pachistima	10	
				Saskatoon serviceberry	5	
				Scouler's willow	5	
				Bluebunch wheatgrass	5	
				Penstemon	5	
				Pinegrass	5	
				Rose	5	
				Slender hawkweed	5	
				Spreading dogbane	5	
				Western yarrow	5	
				Whiteveined shinleaf	5	
				Wyoming big sagebrush	1	

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
366:						
Wilma----------	Douglas-fir/pachistima/pinegrass (CDS412)	Favorable	---	Snowbrush ceanothus	25	
		Normal	---	Elk sedge	10	
		Unfavorable	---	Myrtle pachistima	10	
				Saskatoon serviceberry	5	
				Scouler's willow	5	
				Bluebunch wheatgrass	5	
				Penstemon	5	
				Pinegrass	5	
				Rose	5	
				Slender hawkweed	5	
				Spreading dogbane	5	
				Western yarrow	5	
				Whiteveined shinleaf	5	
				Wyoming big sagebrush	1	
Rock outcrop.						
367:						
Yaxing----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Antelope bitterbrush	20	
		Normal	---	Bluebunch wheatgrass	20	
		Unfavorable	---	Idaho fescue	15	
				Bitter cherry	5	
				Buckwheat	5	
				Common snowberry	5	
				Rabbitbrush	5	
				Western yarrow	5	
368:						
Yaxing----------	Douglas-fir/kinnikinnick (bearberry)/bitterbrush (CDS654)	Favorable	---	Antelope bitterbrush	20	
		Normal	---	Bluebunch wheatgrass	20	
		Unfavorable	---	Idaho fescue	15	
				Bitter cherry	5	
				Buckwheat	5	
				Common snowberry	5	
				Rabbitbrush	5	
				Western yarrow	5	
369:						
Yaxon-----------	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		86
		Normal	900	Other perennial forbs		6
		Unfavorable	700	Silky lupine		5
				Threetip sagebrush		3
370:						
Yaxon-----------	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		86
		Normal	900	Other perennial forbs		6
		Unfavorable	700	Silky lupine		5
				Threetip sagebrush		3
371:						
Yaxon-----------	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		86
		Normal	900	Other perennial forbs		6
		Unfavorable	700	Silky lupine		5
				Threetip sagebrush		3
372:						
Yaxon-----------	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		86
		Normal	900	Other perennial forbs		6
		Unfavorable	700	Silky lupine		5
				Threetip sagebrush		3

Table 6.--Range Ecological Sites, Forest Plant Associations, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		*Pct*	*Pct*
373:						
Yaxon-----------	Loamy 9-15 PZ (R008XY102WA)	Favorable	1,200	Bluebunch wheatgrass		86
		Normal	900	Other perennial forbs		6
		Unfavorable	700	Silky lupine		5
				Threetip sagebrush		3
374:						
Zeb-------------	Grand fir/pinegrass (CWG124)	Favorable	---	Pinegrass	25	
		Normal	---	Elk sedge	20	
		Unfavorable	---	Dogbane	10	
				Myrtle pachistima	10	
				Snowbrush ceanothus	10	
				Kinnikinnick	5	
				Prince's pine	5	
				Rose	5	
				Roughfruit berry	5	
				Tall Oregongrape	5	
				Antelope bitterbrush	2	
				Saskatoon serviceberry	1	
				Common snowberry	1	
				Silky lupine	1	
				Western rattlesnake plantain	1	
W.						
Water						

Table 7.--Forest Productivity

(Absence of an entry indicates that data were not available or the soil does not support woodland vegetation)

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
1:					
Aeric Fluvaquents	Black cottonwood	---		---	Douglas fir, grand fir, western redcedar
	Douglas fir	105	50	86	
	Grand fir	125	50	200	
	Quaking aspen	---		---	
	Western redcedar	---		---	
2:					
Almac	Engelmann spruce	80	100	72	Engelmann spruce, lodgepole pine, subalpine fir
	Lodgepole pine	75	100	72	
	Subalpine fir	75	100	---	
	Whitebark pine	---		---	
3:					
Almac	Engelmann spruce	80	100	72	Engelmann spruce, lodgepole pine, subalpine fir
	Lodgepole pine	75	100	72	
	Subalpine fir	75	100	---	
	Whitebark pine	---		---	
4:					
Almac	Douglas fir	---		---	Douglas fir, Engelmann spruce, Pacific silver fir, lodgepole pine, subalpine fir, western hemlock, western redcedar
	Engelmann spruce	85	100	86	
	Lodgepole pine	80	100	86	
	Pacific silver fir	---		---	
	Subalpine fir	65	100	---	
	Western hemlock	95	100	57	
5:					
Almac	Douglas fir	---		---	Douglas fir, Engelmann spruce, Pacific silver fir, lodgepole pine, subalpine fir, western hemlock, western redcedar
	Engelmann spruce	85	100	86	
	Lodgepole pine	80	100	86	
	Pacific silver fir	---		---	
	Subalpine fir	65	100	---	
	Western hemlock	95	100	57	
Azwell	Grand fir	---		---	Grand fir, lodgepole pine
	Lodgepole pine	50	100	43	
	Subalpine fir	60	100	43	
	Whitebark pine	---		---	
6:					
Almac	Engelmann spruce	80	100	72	Engelmann spruce, lodgepole pine, subalpine fir
	Lodgepole pine	75	100	72	
	Subalpine fir	75	100	---	
	Whitebark pine	---		---	
Azwell	Grand fir	---		---	Grand fir, lodgepole pine
	Lodgepole pine	50	100	43	
	Subalpine fir	60	100	43	
	Whitebark pine	---		---	
Rock outcrop.					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
7:					
Almac	Engelmann spruce	80	100	72	Engelmann spruce,
	Lodgepole pine	75	100	72	lodgepole pine,
	Subalpine fir	75	100	---	subalpine fir
	Whitebark pine	---		---	
Rock outcrop.					
8.					
Alnult					
Reggad					
9:					
Altapeak	Mountain hemlock	---		---	Noble fir,
	Noble fir	---		---	subalpine fir,
	Pacific silver fir	---		---	western hemlock
	Subalpine fir	---		---	
	Western hemlock	85	100	100	
10:					
Altapeak	Mountain hemlock	---		---	Noble fir,
	Noble fir	---		---	subalpine fir,
	Pacific silver fir	---		---	western hemlock
	Subalpine fir	---		---	
	Western hemlock	85	100	100	
11:					
Altapeak	Mountain hemlock	---		---	Noble fir,
	Noble fir	---		---	subalpine fir,
	Pacific silver fir	---		---	western hemlock
	Subalpine fir	---		---	
	Western hemlock	85	100	100	
12:					
Altapeak	Alaska cedar	---		---	Douglas fir,
	Douglas fir	80	50	86	western hemlock
	Pacific silver fir	---		---	
	Western hemlock	80	100	114	
	Western redcedar	---		---	
13:					
Altapeak	Mountain hemlock	---		---	Noble fir,
	Noble fir	---		---	subalpine fir,
	Pacific silver fir	---		---	western hemlock
	Subalpine fir	---		---	
	Western hemlock	85	100	100	
Alnult.					
14:					
Altapeak	Alaska cedar	---		---	Douglas fir,
	Douglas fir	80	50	86	western hemlock
	Pacific silver fir	---		---	
	Western hemlock	80	100	114	
	Western redcedar	---		---	
Alnult.					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
15:					
Altapeak	Alaska cedar	---		---	Douglas fir, western hemlock
	Douglas fir	80	50	86	
	Pacific silver fir	---		---	
	Western hemlock	80	100	114	
	Western redcedar	---		---	
Alnult.					
16:					
Anatone.					
Blewett	Douglas fir	40	50	14	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	75	100	29	
17.					
Anatone					
Rock outcrop					
18.					
Andic Cryochrepts					
19.					
Andic Cryumbrepts					
20.					
Andic Cryumbrepts					
21:					
Andic Cryumbrepts.					
Haplocryods	Engelmann spruce	110	100	---	Engelmann spruce, subalpine fir, western larch
	Subalpine fir	85	100	86	
	Whitebark pine	---		---	
Rock outcrop.					
22.					
Andic Cryumbrepts					
Rock outcrop					
23.					
Andic Cryumbrepts					
Rock outcrop					
24:					
Andic Haplumbrepts	Douglas fir	95	50	114	Douglas fir, grand fir
	Grand fir	110	50	172	
	Ponderosa pine	---		---	
Rock outcrop.					
25:					
Angle	Douglas fir	60	50	14	Douglas fir, ponderosa pine
	Ponderosa pine	75	100	29	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
26:					
Aquic Cryumbrepts	Douglas fir	---		---	Douglas fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Quaking aspen	---		---	
	Subalpine fir	100	100	57	
	Western hemlock	75	100	---	
	Western redcedar	---		---	
	Western white pine	---		---	
27:					
Ardening	Douglas fir	70	50	---	Douglas fir, ponderosa pine
	Ponderosa pine	80	100	43	
28:					
Ardenmont	Douglas fir	56	50	29	Douglas fir, grand fir, ponderosa pine, western larch
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	57	
	Western larch	---		---	
29:					
Ardenmont	Douglas fir	56	50	29	Douglas fir, grand fir, ponderosa pine, western larch
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	57	
	Western larch	---		---	
30:					
Ardenmont	Douglas fir	56	50	29	Douglas fir, grand fir, ponderosa pine, western larch
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	57	
	Western larch	---		---	
31:					
Ardenmont	Douglas fir	56	50	29	Douglas fir, grand fir, ponderosa pine, western larch
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	57	
	Western larch	---		---	
Swakane	Douglas fir	---		---	Ponderosa pine
	Ponderosa pine	60	100	14	
32:					
Ardenvoir	Douglas fir	50	50	29	Douglas fir, ponderosa pine, western larch
	Ponderosa pine	70	100	57	
	Western larch	---		---	
33:					
Ardenvoir	Douglas fir	50	50	29	Douglas fir, ponderosa pine, western larch
	Ponderosa pine	70	100	57	
	Western larch	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
34:					
Azwell	Grand fir	---		---	Grand fir, lodgepole pine
	Lodgepole pine	50	100	43	
	Subalpine fir	60	100	43	
	Whitebark pine	---		---	
Rock outcrop.					
35. Bagmont					
36:					
Bigcreek	Douglas fir	70	50	57	Douglas fir, grand fir, ponderosa pine
	Grand fir	85	50	86	
	Lodgepole pine	---		---	
	Ponderosa pine	80	100	72	
	Western white pine	---		---	
37:					
Billyridge	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	82	100	29	
38:					
Billyridge	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	82	100	29	
39:					
Billyridge	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	82	100	29	
40:					
Bisping	Douglas fir	65	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	75	100	43	
41:					
Bisping	Douglas fir	65	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	75	100	43	
42:					
Bisping	Douglas fir	65	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	75	100	43	
43. Bjork					
44. Bjork					
Rock outcrop					
45:					
Blag	Ponderosa pine	65	100	14	Ponderosa pine
Cle Elum	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	29	
Rock outcrop.					
46:					
Blag	Ponderosa pine	65	100	14	Ponderosa pine

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
46:					
Rock outcrop.					
47:					
Blewett	Douglas fir	40	50	14	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	75	100	29	
Rock outcrop.					
48.					
Borland					
49.					
Borland					
Rock outcrop					
50:					
Brief	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	85	100	43	
51:					
Brisky	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	55	100	14	
Rock outcrop.					
52.					
Burch					
53:					
Burnscreek	Douglas fir	70	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	92	100	43	
54:					
Burrant	Douglas fir	60	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	85	100	72	
55:					
Burrant	Douglas fir	60	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	85	100	72	
56.					
Cashmont					
57.					
Cashmont					
58:					
Chapot	Douglas fir	65	50	---	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	80	100	---	
59:					
Chinkmin	Douglas fir	75	50	72	Douglas fir, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	100	100	100	
	Western redcedar	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
60:					
Chinkmin	Douglas fir	75	50	72	Douglas fir, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	100	100	100	
	Western redcedar	---		---	
61:					
Chinkmin	Douglas fir	75	50	72	Douglas fir, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	100	100	100	
	Western redcedar	---		---	
Altapeak	Alaska cedar	---		---	Noble fir, western hemlock
	Mountain hemlock	---		---	
	Noble fir	---		---	
	Pacific silver fir	---		---	
	Western hemlock	65	100	100	
62:					
Chinkmin	Douglas fir	75	50	72	Douglas fir, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	100	100	100	
	Western redcedar	---		---	
Altapeak	Alaska cedar	---		---	Noble fir, western hemlock
	Mountain hemlock	---		---	
	Noble fir	---		---	
	Pacific silver fir	---		---	
	Western hemlock	65	100	100	
63:					
Chiwaukum	Douglas fir	60	50	43	Douglas fir, lodgepole pine
	Lodgepole pine	80	100	86	
	Western white pine	60	50	114	
64:					
Chiwaukum	Douglas fir	60	50	43	Douglas fir, lodgepole pine
	Lodgepole pine	80	100	86	
	Western white pine	60	50	114	
65:					
Chiwaukum	Douglas fir	80	50	86	Douglas fir, Engelmann spruce, grand fir, lodgepole pine
	Engelmann spruce	---		---	
	Lodgepole pine	---		---	
	Subalpine fir	60	100	43	
	Western hemlock	94	100	---	
	Western white pine	60	50	114	
66:					
Chiwaukum	Douglas fir	60	50	43	Douglas fir, lodgepole pine
	Lodgepole pine	80	100	86	
	Western white pine	60	50	114	
67:					
Chiwaukum	Douglas fir	60	50	43	Douglas fir, lodgepole pine
	Lodgepole pine	80	100	86	
	Western white pine	60	50	114	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
67:					
Chiwaukum, south	Douglas fir	80	50	86	Douglas fir, Engelmann spruce, grand fir, lodgepole pine
	Engelmann spruce	---		---	
	Lodgepole pine	---		---	
	Subalpine fir	60	100	43	
	Western hemlock	94	100	---	
	Western white pine	60	50	114	
68:					
Chiwaukum	Douglas fir	60	50	43	Douglas fir, lodgepole pine
	Lodgepole pine	80	100	86	
	Western white pine	60	50	114	
Chiwaukum, south	Douglas fir	80	50	86	Douglas fir, Engelmann spruce, grand fir, lodgepole pine
	Engelmann spruce	---		---	
	Lodgepole pine	---		---	
	Subalpine fir	60	100	43	
	Western hemlock	94	100	---	
	Western white pine	60	50	114	
69:					
Chiwawa	Douglas fir	---		---	Douglas fir, ponderosa pine
	Grand fir	85	50	---	
	Lodgepole pine	100	100	129	
	Ponderosa pine	100	100	100	
70:					
Choralmont, till substratum	Douglas fir	78	50	72	Douglas fir, lodgepole pine, western hemlock
	Grand fir	115	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	100	100	100	
	Western hemlock	---		---	
	Western white pine	---		---	
Choralmont	Douglas fir	75	50	72	Douglas fir, grand fir, lodgepole pine
	Grand fir	85	50	129	
	Lodgepole pine	60	100	43	
	Ponderosa pine	---		---	
71:					
Choralmont	Douglas fir	75	50	72	Douglas fir, grand fir, lodgepole pine
	Grand fir	85	50	129	
	Lodgepole pine	60	100	43	
	Ponderosa pine	---		---	
72:					
Choralmont	Douglas fir	75	50	72	Douglas fir, grand fir, lodgepole pine
	Grand fir	85	50	129	
	Lodgepole pine	60	100	43	
	Ponderosa pine	---		---	
73:					
Choralmont	Douglas fir	78	50	72	Douglas fir, lodgepole pine, western hemlock
	Grand fir	115	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	100	100	100	
	Western hemlock	---		---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
74:					
Choralmont	Douglas fir	78	50	72	Douglas fir, lodgepole pine, western hemlock
	Grand fir	115	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	100	100	100	
	Western hemlock	---		---	
	Western white pine	---		---	
75:					
Choralmont	Douglas fir	75	50	72	Douglas fir, grand fir, lodgepole pine
	Grand fir	85	50	129	
	Lodgepole pine	60	100	43	
	Ponderosa pine	---		---	
Limking	Douglas fir	43	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	60	100	57	
	Ponderosa pine	80	100	72	
76:					
Chumstick	Douglas fir	65	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	
77:					
Chumstick	Douglas fir	65	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	
78:					
Chumstick	Douglas fir	65	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	
79:					
Cle Elum	Douglas fir	52	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	90	100	43	
80:					
Cle Elum	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	29	
81:					
Coopmont	Douglas fir	55	50	43	Douglas fir
	Lodgepole pine	75	100	72	
	Subalpine fir	70	100	57	
82:					
Coopmont	Douglas fir	55	50	43	Douglas fir
	Lodgepole pine	75	100	72	
	Subalpine fir	70	100	57	
83.					
Cowiche					
Cowiche, very deep					
84.					
Cowiche					
Cowiche, very deep					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
85:					
Cryomont	Black cottonwood	---		---	Grand fir, western hemlock
	Douglas fir	---		---	
	Engelmann spruce	95	100	100	
	Grand fir	125	50	200	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	75	100	157	
	Western redcedar	---		---	
86:					
Cryomont	Black cottonwood	---		---	Douglas fir, western hemlock
	Douglas fir	80	50	---	
	Engelmann spruce	95	100	---	
	Grand fir	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	110	100	---	
	Western redcedar	---		---	
87:					
Cryomont	Black cottonwood	---		---	Grand fir, western hemlock
	Douglas fir	---		---	
	Engelmann spruce	95	100	100	
	Grand fir	125	50	200	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	75	100	157	
	Western redcedar	---		---	
Cryomont, fan	Black cottonwood	---		---	Douglas fir, western hemlock
	Douglas fir	80	50	---	
	Engelmann spruce	95	100	---	
	Grand fir	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	110	100	---	
	Western redcedar	---		---	
88:					
Culving	Douglas fir	60	50	29	Douglas fir, grand fir, western larch
	Grand fir	95	50	86	
	Lodgepole pine	---		---	
	Western larch	---		---	
	Western white pine	---		---	
Rock outcrop.					
89:					
Culvop	Douglas fir	---		---	Engelmann spruce, lodgepole pine
	Engelmann spruce	75	100	72	
	Grand fir	60	50	72	
	Lodgepole pine	---		---	
	Mountain hemlock	---		---	
	Subalpine fir	60	100	43	
	Western larch	---		---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
90:					
Devore	Douglas fir	50	50	29	Douglas fir, lodgepole pine, subalpine fir
	Lodgepole pine	---		---	
	Subalpine fir	70	100	57	
	Whitebark pine	---		---	
Rock outcrop.					
91:					
Dinkelman	Douglas fir	67	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	88	100	57	
92:					
Dinkelman	Douglas fir	67	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	88	100	57	
93:					
Dinkelman	Douglas fir	67	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	88	100	57	
Rock outcrop.					
94.					
Dinkels					
95.					
Dinkels					
96.					
Dinkels					
97:					
Domkey	Douglas fir	70	50	57	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	70	100	43	
98:					
Domkey	Douglas fir	70	50	57	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	70	100	43	
99:					
Domkey	Douglas fir	70	50	57	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	70	100	43	
McCree	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
100:					
Dragoon	Douglas fir	50	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	
101:					
Dragoon	Douglas fir	50	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	
102.					
Entiat					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
103.					
Entiat					
Rock outcrop					
104.					
Entic Haplumbrepts					
105:					
Esmeralda	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, subalpine fir
	Engelmann spruce	---		---	
	Mountain hemlock	50		43	
	Pacific silver fir	---		---	
	Subalpine fir	65	100	43	
	Subalpine larch	---		---	
	Whitebark pine	---		---	
106:					
Esmeralda	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, subalpine fir
	Engelmann spruce	---		---	
	Mountain hemlock	50		43	
	Pacific silver fir	---		---	
	Subalpine fir	65	100	43	
	Subalpine larch	---		---	
	Whitebark pine	---		---	
Rock outcrop.					
107:					
Fears	Engelmann spruce	---		---	Engelmann spruce, lodgepole pine, subalpine fir
	Lodgepole pine	55	100	43	
	Subalpine fir	75	100	72	
	Whitebark pine	---		---	
108:					
Fears	Engelmann spruce	---		---	Engelmann spruce, lodgepole pine, subalpine fir
	Lodgepole pine	55	100	43	
	Subalpine fir	75	100	72	
	Whitebark pine	---		---	
Devore	Douglas fir	50	50	29	Douglas fir, lodgepole pine, subalpine fir
	Lodgepole pine	---		---	
	Subalpine fir	70	100	57	
	Whitebark pine	---		---	
109:					
Fernow	Douglas fir	120	50	---	Douglas fir, Engelmann spruce, Pacific silver fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	110	100	---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
110:					
Fernow	Douglas fir	120	50	---	Douglas fir, Engelmann spruce, Pacific silver fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	110	100	---	
	Western white pine	---		---	
111:					
Fernow	Douglas fir	120	50	---	Douglas fir, Engelmann spruce, Pacific silver fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	110	100	---	
	Western white pine	---		---	
Serene	Douglas fir	---		---	Pacific silver fir, mountain hemlock, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	60	100	57	
112:					
Fluvaquents	Black cottonwood	---		---	Black cottonwood, quaking aspen, red alder, western redcedar
	Quaking aspen	---		---	
	Red alder	---		---	
	Western redcedar	---		---	
113:					
Georgecreek	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	100	100	57	
114:					
Georgecreek	Douglas fir	60	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	65	100	43	
115:					
Georgecreek	Douglas fir	60	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	65	100	43	
116:					
Georgecreek	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	100	100	57	
Dragoon	Douglas fir	50	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	
117:					
Georgecreek	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	100	100	57	
Dragoon	Douglas fir	50	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
118:					
Gilpar	Douglas fir	---		---	Douglas fir, Engelmann spruce, Pacific silver fir, noble fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	100	100	143	
	Western white pine	---		---	
119:					
Gilpar	Douglas fir	---		---	Douglas fir, Engelmann spruce, Pacific silver fir, noble fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	100	100	143	
	Western white pine	---		---	
Nimue	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
120:					
Gilpar	Douglas fir	---		---	Douglas fir, Engelmann spruce, Pacific silver fir, noble fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	100	100	143	
	Western white pine	---		---	
Nimue	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
Rock outcrop.					
121:					
Gilpar	Douglas fir	---		---	Douglas fir, Engelmann spruce, Pacific silver fir, noble fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	100	100	143	
	Western white pine	---		---	
Rock outcrop.					
122. Glaciers, snowfields					
123:					
Goffpeak	Douglas fir	50	50	29	Douglas fir, lodgepole pine
	Lodgepole pine	72	100	72	
	Subalpine fir	70	100	57	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
124:					
Goffpeak	Douglas fir	50	50	29	Douglas fir, lodgepole pine
	Lodgepole pine	72	100	72	
	Subalpine fir	70	100	57	
Fears	Engelmann spruce	---		---	Engelmann spruce, lodgepole pine, subalpine fir
	Lodgepole pine	55	100	43	
	Subalpine fir	75	100	72	
	Whitebark pine	---		---	
125:					
Haplocryods, cold.					
Haplocryods, stony	Engelmann spruce	110	100	---	Engelmann spruce, subalpine fir, western larch
	Subalpine fir	85	100	86	
	Whitebark pine	---		---	
126:					
Haplocryods	Douglas fir	85	50	---	Douglas fir, Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	95	100	---	
	Subalpine fir	---		---	
	Western hemlock	105	100	129	
Andic Cryochrepts.					
Rock outcrop.					
127:					
Haploxerolls	Douglas fir	65	50	29	Douglas fir, lodgepole pine, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	90	100	43	
128:					
Haploxerolls	Douglas fir	65	50	29	Douglas fir, lodgepole pine, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	90	100	43	
129:					
Humicryods	Engelmann spruce	---		---	Engelmann spruce, subalpine fir
	Mountain hemlock	45		---	
	Pacific silver fir	---		---	
	Subalpine fir	65	100	57	
	Whitebark pine	---		---	
Andic Cryumbrepts.					
130:					
Humicryods	Engelmann spruce	---		---	Engelmann spruce, subalpine fir
	Mountain hemlock	45		---	
	Pacific silver fir	---		---	
	Subalpine fir	65	100	57	
	Whitebark pine	---		---	
Andic Cryochrepts.					
Rock outcrop.					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
131:					
Humicryods	Engelmann spruce	---		---	Engelmann spruce, subalpine fir
	Mountain hemlock	45		---	
	Pacific silver fir	---		---	
	Subalpine fir	65	100	57	
	Whitebark pine	---		---	
Andic Cryumbrepts.					
Rock outcrop.					
132. Hyprairie					
133. Hyprairie					
134:					
Hyprairie.					
Oldbutte	Douglas fir	105	50	---	Douglas fir, ponderosa pine
	Ponderosa pine	95	100	---	
135:					
Icicle, south	Douglas fir	65	50	57	Douglas fir, grand fir, ponderosa pine
	Grand fir	75	50	100	
	Ponderosa pine	90	100	86	
Icicle	Douglas fir	70	50	57	Douglas fir, grand fir, ponderosa pine
	Grand fir	75	50	100	
	Ponderosa pine	100	100	100	
136:					
Icicle	Douglas fir	65	50	57	Douglas fir, grand fir, ponderosa pine
	Grand fir	75	50	100	
	Ponderosa pine	90	100	86	
137:					
Icicle	Douglas fir	91	50	72	Douglas fir, grand fir, ponderosa pine
	Grand fir	90	50	129	
	Ponderosa pine	115	100	100	
138:					
Icicle	Douglas fir	70	50	57	Douglas fir, grand fir, ponderosa pine
	Grand fir	75	50	100	
	Ponderosa pine	100	100	100	
139:					
Icicle	Douglas fir	80	50	86	Douglas fir, grand fir, ponderosa pine
	Grand fir	85	50	114	
	Ponderosa pine	100	100	129	
140:					
Icicle	Douglas fir	85	50	86	Douglas fir, grand fir, ponderosa pine
	Grand fir	110	50	172	
	Ponderosa pine	105	100	114	
Chumstick	Douglas fir	65	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	
Rock outcrop.					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
141:					
Icicle	Douglas fir	85	50	86	Douglas fir, grand fir, ponderosa pine
	Grand fir	110	50	172	
	Ponderosa pine	105	100	114	
Chumstick	Douglas fir	65	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	
Rock outcrop.					
142:					
Inkler	Douglas fir	55	50	29	Douglas fir, grand fir
	Grand fir	75	50	72	
	Ponderosa pine	---		---	
143:					
Isella	Engelmann spruce	---		---	Engelmann spruce, Pacific silver fir, subalpine fir
	Mountain hemlock	66		---	
	Pacific silver fir	---		---	
	Subalpine fir	66	100	57	
	Whitebark pine	---		---	
Fernow	Douglas fir	120	50	---	Douglas fir, Engelmann spruce, Pacific silver fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	110	100	---	
	Western white pine	---		---	
144:					
Isella	Engelmann spruce	---		---	Engelmann spruce, Pacific silver fir, subalpine fir
	Mountain hemlock	66		---	
	Pacific silver fir	---		---	
	Subalpine fir	66	100	57	
	Whitebark pine	---		---	
Fernow	Douglas fir	120	50	---	Douglas fir, Engelmann spruce, Pacific silver fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	110	100	---	
	Western white pine	---		---	
145:					
Isella	Engelmann spruce	---		---	Engelmann spruce, Pacific silver fir, subalpine fir
	Mountain hemlock	50		---	
	Pacific silver fir	---		---	
	Subalpine fir	95	100	100	
Nimue	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	Yrs	Cu ft/ac/yr	
146:					
Isella	Engelmann spruce	---		---	Engelmann spruce, Pacific silver fir, subalpine fir
	Mountain hemlock	50		---	
	Pacific silver fir	---		---	
	Subalpine fir	95	100	100	
Nimue	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
147:					
Kingmont	Douglas fir	70	50	43	Douglas fir, grand fir, western larch
	Grand fir	75	50	100	
	Ponderosa pine	---		---	
	Western larch	---		---	
148:					
Kladnick	Douglas fir	79	50	72	Douglas fir, Engelmann spruce, grand fir
	Engelmann spruce	---		---	
	Grand fir	110	50	172	
	Lodgepole pine	---		---	
	Western white pine	---		---	
149:					
Kladnick	Douglas fir	100	50	114	Douglas fir, western hemlock
	Grand fir	130	50	214	
	Pacific silver fir	---		---	
	Western hemlock	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
150:					
Kladnick	Douglas fir	70	50	43	Douglas fir, grand fir
	Grand fir	90	50	129	
	Lodgepole pine	---		---	
	Subalpine fir	---		---	
	Western white pine	---		---	
151:					
Klapatche	Douglas fir	---		---	Douglas fir, Engelmann spruce, subalpine fir, western hemlock
	Pacific silver fir	---		---	
	Subalpine fir	65	100	57	
	Western hemlock	---		86	
	Western larch	---		---	
	Western white pine	---		---	
Altapeak	Mountain hemlock	---		---	Noble fir, subalpine fir, western hemlock
	Noble fir	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	85	100	100	
152:					
Kloochman	Douglas fir	70	50	43	Douglas fir, grand fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	85	100	43	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
153:					
Kloochman	Douglas fir	70	50	43	Douglas fir, grand fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	85	100	43	
154:					
Kloochman	Douglas fir	70	50	43	Douglas fir, grand fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	85	100	43	
155:					
Kloochman	Douglas fir	70	50	43	Douglas fir, grand fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	85	100	43	
Inkler	Douglas fir	55	50	29	Douglas fir, grand fir
	Grand fir	75	50	72	
	Ponderosa pine	---		---	
156:					
Kloochman	Douglas fir	70	50	43	Grand fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	85	100	43	
Inkler	Douglas fir	55	50	29	Douglas fir, grand fir
	Grand fir	75	50	72	
	Ponderosa pine	---		---	
Rock outcrop.					
157:					
Kloochman	Douglas fir	70	50	43	Grand fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	85	100	43	
Rock outcrop.					
158:					
Limking	Douglas fir	43	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	60	100	57	
	Ponderosa pine	80	100	72	
159:					
Limking	Douglas fir	43	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	60	100	57	
	Ponderosa pine	80	100	72	
Coopmont	Douglas fir	55	50	43	Douglas fir
	Lodgepole pine	75	100	72	
	Subalpine fir	70	100	57	
160:					
Limking	Douglas fir	43	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	60	100	57	
	Ponderosa pine	80	100	72	
Coopmont	Douglas fir	55	50	43	Douglas fir
	Lodgepole pine	75	100	72	
	Subalpine fir	70	100	57	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
161:					
Limking	Douglas fir	43	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	60	100	57	
	Ponderosa pine	80	100	72	
Coopmont	Douglas fir	55	50	43	Douglas fir
	Lodgepole pine	75	100	72	
	Subalpine fir	70	100	57	
Rock outcrop.					
162:					
Limking	Douglas fir	43	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	60	100	57	
	Ponderosa pine	80	100	72	
Rock outcrop.					
163:					
Line	Douglas fir	70	50	57	Douglas fir, lodgepole pine, western hemlock, western redcedar
	Lodgepole pine	---		---	
	Western hemlock	60	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
164:					
Line	Douglas fir	50	50	29	Douglas fir, Pacific silver fir, western hemlock, western redcedar
	Pacific silver fir	---		---	
	Western hemlock	103	100	143	
	Western redcedar	---		---	
165:					
Line	Douglas fir	50	50	72	Douglas fir, western hemlock, western redcedar
	Pacific silver fir	---		---	
	Western hemlock	100	100	143	
	Western white pine	---		---	
166:					
Line	Douglas fir	70	50	57	Douglas fir, lodgepole pine, western hemlock, western redcedar
	Lodgepole pine	---		---	
	Western hemlock	60	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
Vabbing	Douglas fir	73	50	72	Douglas fir, Pacific silver fir, western hemlock
	Grand fir	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	86	
	Western redcedar	---		---	
	Western white pine	---		---	
167:					
Loneridge	Douglas fir	---		---	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	75	100	29	
	Western larch	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
168:					
Loneridge	Douglas fir	65	50	57	Douglas fir, grand fir, ponderosa pine
	Grand fir	90	50	129	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western larch	65	50	86	
169:					
Loneridge	Douglas fir	65	50	57	Douglas fir, grand fir, ponderosa pine
	Grand fir	90	50	129	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western larch	65	50	86	
170:					
Macreeing	Douglas fir	55	50	---	Douglas fir, ponderosa pine
	Ponderosa pine	71	100	---	
171:					
Macreeing	Douglas fir	55	50	---	Douglas fir, ponderosa pine
	Ponderosa pine	71	100	---	
172:					
Macreeing	Douglas fir	55	50	---	Douglas fir, ponderosa pine
	Ponderosa pine	71	100	---	
Rock outcrop.					
173. Mansonia					
174:					
Mansonia.					
Swakane	Douglas fir	---		---	Ponderosa pine
	Ponderosa pine	60	100	14	
Rock outcrop.					
175:					
Mansonia.					
Swakane	Douglas fir	---		---	Ponderosa pine
	Ponderosa pine	60	100	14	
Rock outcrop.					
176. Marmont					
177. Marmont					
178. Marmont					
179:					
McCree	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
180:					
McCree	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
181:					
McCree	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
182:					
McCree	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
Palmich	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	65	100	57	
183:					
McCree	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
Palmont	Douglas fir	55	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	57	
Rock outcrop.					
184:					
McCree	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
Rock outcrop.					
185:					
Mippon	Black cottonwood	---		---	Douglas fir, grand fir, ponderosa pine
	Douglas fir	75	50	72	
	Engelmann spruce	---		---	
	Grand fir	110	50	100	
	Lodgepole pine	---		---	
	Ponderosa pine	105	100	100	
	Quaking aspen	---		---	
	Western larch	---		---	
186:					
Mippon	Black cottonwood	---		---	Douglas fir, grand fir, ponderosa pine
	Douglas fir	75	50	72	
	Engelmann spruce	---		---	
	Grand fir	110	50	100	
	Lodgepole pine	---		---	
	Ponderosa pine	105	100	100	
	Quaking aspen	---		---	
	Western larch	---		---	
187:					
Mippon	Black cottonwood	---		---	Douglas fir, grand fir, ponderosa pine
	Douglas fir	75	50	72	
	Engelmann spruce	---		---	
	Grand fir	110	50	100	
	Lodgepole pine	---		---	
	Ponderosa pine	105	100	100	
	Quaking aspen	---		---	
	Western larch	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
188. Morical					
189. Morical					
190. Morical					
191: Morical.					
Dragoon	Douglas fir	50	50	29	Douglas fir,
	Ponderosa pine	70	100	29	ponderosa pine
192: Morical.					
Dragoon	Douglas fir	50	50	29	Douglas fir,
	Ponderosa pine	70	100	29	ponderosa pine
193: Morical.					
Dragoon	Douglas fir	50	50	29	Douglas fir,
	Ponderosa pine	70	100	29	ponderosa pine
194: Morical.					
Dragoon	Douglas fir	50	50	29	Douglas fir,
	Ponderosa pine	70	100	29	ponderosa pine
195: Mountaineer	Douglas fir	75	50	72	Douglas fir, grand
	Grand fir	95	50	114	fir, ponderosa
	Lodgepole pine	---		---	pine
	Ponderosa pine	80	100	43	
	Western white pine	---		---	
196: Mountaineer	Douglas fir	75	50	72	Douglas fir, grand
	Grand fir	95	50	114	fir, ponderosa
	Lodgepole pine	---		---	pine
	Ponderosa pine	80	100	43	
	Western white pine	---		---	
Rock outcrop.					
197: Mountaineer	Douglas fir	75	50	72	Douglas fir, grand
	Grand fir	95	50	114	fir, ponderosa
	Lodgepole pine	---		---	pine
	Ponderosa pine	80	100	43	
	Western white pine	---		---	
Tillicum	Douglas fir	65	50	57	Douglas fir,
	Grand fir	85	50	100	western larch
	Lodgepole pine	---		---	
	Western larch	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	Yrs	Cu ft/ac/yr	
197:					
Rock outcrop.					
198:					
Nahahum	Douglas fir	70	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	90	100	57	
199:					
Nahahum	Douglas fir	70	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	90	100	57	
Taneum.					
200:					
Nard	Douglas fir	69	50	---	Douglas fir, ponderosa pine
	Grand fir	105	50	---	
	Ponderosa pine	99	100	---	
201:					
Nard	Douglas fir	69	50	---	Douglas fir, ponderosa pine
	Grand fir	105	50	---	
	Ponderosa pine	99	100	---	
202:					
Nard	Douglas fir	69	50	---	Douglas fir, ponderosa pine
	Grand fir	105	50	---	
	Ponderosa pine	99	100	---	
Blag	Ponderosa pine	65	100	14	Ponderosa pine
203:					
Nard	Douglas fir	69	50	---	Douglas fir, ponderosa pine
	Grand fir	105	50	---	
	Ponderosa pine	99	100	---	
Brisky	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	55	100	14	
204:					
Nardine	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	---		---	
205:					
Nardmont	Douglas fir	81	50	72	Douglas fir, grand fir
	Grand fir	90	50	129	
	Ponderosa pine	---		---	
206:					
Nardmont	Douglas fir	81	50	72	Douglas fir, grand fir
	Grand fir	90	50	129	
	Ponderosa pine	---		---	
207:					
Natapoc	Douglas fir	78	50	72	Douglas fir, grand fir, ponderosa pine
	Grand fir	110	50	143	
	Ponderosa pine	100	100	100	
	Western redcedar	---		---	
208:					
Natapoc	Douglas fir	65	50	57	Douglas fir, ponderosa pine
	Ponderosa pine	90	100	72	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Common trees	Potential productivity: Site index	Potential productivity: Base age	Potential productivity: Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
209:					
Natapoc	Douglas fir	65	50	57	Douglas fir, ponderosa pine
	Ponderosa pine	90	100	72	
Thow	Douglas fir	88	50	---	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	---	
210:					
Naxing	Douglas fir	65	50	43	Engelmann spruce, lodgepole pine, subalpine fir, western larch
	Engelmann spruce	75	100	72	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Subalpine fir	75	100	72	
	Western larch	45	50	57	
	Whitebark pine	---		---	
211:					
Naxing	Douglas fir	65	50	43	Engelmann spruce, lodgepole pine, subalpine fir, western larch
	Engelmann spruce	75	100	72	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Subalpine fir	75	100	72	
	Western larch	45	50	57	
	Whitebark pine	---		---	
212:					
Newbell	Douglas fir	55	50	43	Douglas fir, western larch
	Grand fir	---		---	
	Lodgepole pine	90	100	114	
	Western larch	50	50	---	
	Western white pine	---		---	
213:					
Nimue	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
214:					
Nimue	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
215:					
Nimue	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
215:					
Rock outcrop.					
216:					
Nimue	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
Nimue, dry	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
217:					
Nimue, dry	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
Nimue	Douglas fir	---		---	Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
Rock outcrop.					
218:					
Oldbutte	Douglas fir	105	50	---	Douglas fir, ponderosa pine
	Ponderosa pine	95	100	---	
219:					
Oldbutte	Douglas fir	105	50	---	Douglas fir, ponderosa pine
	Ponderosa pine	95	100	---	
220:					
Palmich	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	65	100	57	
221:					
Palmich	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	65	100	57	
222:					
Palmich	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	65	100	57	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	Yrs	Cu ft/ac/yr	
223:					
Palmich	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	65	100	57	
McCree	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
224:					
Palmich	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	65	100	57	
McCree	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
Rock outcrop.					
225:					
Palmich	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	65	100	57	
Rock outcrop.					
226:					
Palmont	Douglas fir	55	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	57	
227:					
Palmont	Douglas fir	55	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	57	
228:					
Palmont	Douglas fir	55	50	29	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	57	
229:					
Palmont	Douglas fir	55	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	57	
Rock outcrop.					
230:					
Ramparter	Douglas fir	55	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	57	
231:					
Ramparter	Douglas fir	65	50	29	Douglas fir, ponderosa pine
	Lodgepole pine	---		---	
	Ponderosa pine	77	100	43	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
232:					
Ramparter	Douglas fir	65	50	29	Douglas fir,
	Lodgepole pine	---		---	ponderosa pine
	Ponderosa pine	77	100	43	
233:					
Ramparter	Douglas fir	65	50	29	Douglas fir,
	Lodgepole pine	---		---	ponderosa pine
	Ponderosa pine	77	100	43	
234:					
Ramparter	Douglas fir	65	50	57	Douglas fir,
	Ponderosa pine	77	100	57	ponderosa pine
235:					
Ramparter	Douglas fir	65	50	57	Douglas fir,
	Ponderosa pine	77	100	57	ponderosa pine
236:					
Ramparter	Douglas fir	65	50	29	Douglas fir,
	Lodgepole pine	---		---	ponderosa pine
	Ponderosa pine	77	100	43	
Wilma	Douglas fir	53	50	29	Douglas fir,
	Ponderosa pine	75	100	29	ponderosa pine
237. Reggad					
238: Reggad.					
Serene	Douglas fir	---		---	Pacific silver fir,
	Mountain hemlock	---		---	mountain hemlock,
	Pacific silver fir	---		---	western hemlock
	Subalpine fir	---		---	
	Western hemlock	60	100	57	
239. Rock outcrop					
240: Rock outcrop.					
Blewett	Douglas fir	40	50	14	Douglas fir,
	Grand fir	---		---	ponderosa pine
	Ponderosa pine	75	100	29	
241. Rock outcrop					
Borland					
242: Rock outcrop.					
Chumstick	Douglas fir	65	50	29	Douglas fir,
	Ponderosa pine	70	100	29	ponderosa pine

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
242:					
Icicle	Douglas fir	85	50	86	Douglas fir, grand fir, ponderosa pine
	Grand fir	110	50	172	
	Ponderosa pine	105	100	114	
243:					
Rock outcrop.					
Chumstick	Douglas fir	65	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	29	
Icicle	Douglas fir	85	50	86	Douglas fir, grand fir, ponderosa pine
	Grand fir	110	50	172	
	Ponderosa pine	105	100	114	
244.					
Rock outcrop					
Rubble land					
Glaciers, snowfields					
245:					
Rock outcrop.					
Rubble land.					
Serene	Douglas fir	---		---	Pacific silver fir, mountain hemlock, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	60	100	57	
246.					
Rubble land					
Rock outcrop					
247:					
Safety	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	65	100	29	
248:					
Safety	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	65	100	29	
249:					
Safety	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	65	100	29	
250:					
Safety	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	65	100	29	
Rock outcrop.					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
251:					
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
252:					
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
253:					
Saska	Douglas fir	93	50	100	Douglas fir, grand fir, ponderosa pine, western hemlock
	Grand fir	130	50	---	
	Ponderosa pine	110	100	---	
	Western hemlock	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
254:					
Saska	Douglas fir	93	50	100	Douglas fir, grand fir, ponderosa pine, western hemlock
	Grand fir	130	50	---	
	Ponderosa pine	110	100	---	
	Western hemlock	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
255:					
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
256:					
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
257:					
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
Rock outcrop.					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
258:					
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
Saska, bouldery	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
259:					
Saska, south	Douglas fir	93	50	100	Douglas fir, grand fir, ponderosa pine, western hemlock
	Grand fir	130	50	---	
	Ponderosa pine	110	100	---	
	Western hemlock	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
260:					
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
Saska, bouldery	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
261:					
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
261:					
Saska, bouldery	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
Rock outcrop.					
262:					
Saska, south	Douglas fir	93	50	100	Douglas fir, grand fir, ponderosa pine, western hemlock
	Grand fir	130	50	---	
	Ponderosa pine	110	100	---	
	Western hemlock	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	
Rock outcrop.					
263:					
Saydab	Douglas fir	---		---	Lodgepole pine, subalpine fir
	Lodgepole pine	55	100	43	
	Subalpine fir	45	100	29	
	Western larch	---		---	
264:					
Scotties	Douglas fir	65	50	43	Douglas fir, grand fir
	Grand fir	86	50	72	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western larch	65	50	57	
	Western white pine	---		---	
265:					
Serene	Douglas fir	---		---	Pacific silver fir, mountain hemlock, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	60	100	57	
266:					
Serene	Douglas fir	---		---	Pacific silver fir, mountain hemlock, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	60	100	57	
Rock outcrop.					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
267:					
Serpen	Douglas fir	60	50	29	Douglas fir, ponderosa pine, western larch
	Ponderosa pine	80	100	43	
	Western larch	---		---	
268:					
Serpen	Douglas fir	60	50	29	Douglas fir, ponderosa pine, western larch
	Ponderosa pine	80	100	43	
	Western larch	---		---	
269:					
Shadypass	Douglas fir	55	50	43	Douglas fir
	Lodgepole pine	75	100	72	
	Subalpine fir	70	100	57	
270:					
Shamel	Douglas fir	65	50	57	Douglas fir, ponderosa pine
	Ponderosa pine	---		---	
271:					
Shamel	Douglas fir	65	50	57	Douglas fir, ponderosa pine
	Ponderosa pine	---		---	
272:					
Shamel	Douglas fir	65	50	57	Douglas fir, ponderosa pine
	Ponderosa pine	---		---	
Rock outcrop.					
273:					
Shaser	Douglas fir	60	50	43	Douglas fir, grand fir, ponderosa pine
	Grand fir	70	50	100	
	Ponderosa pine	85	100	---	
Blewett	Douglas fir	40	50	14	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	75	100	29	
274:					
Shaser	Douglas fir	60	50	43	Douglas fir, grand fir, ponderosa pine
	Grand fir	70	50	100	
	Ponderosa pine	85	100	---	
Brisky	Douglas fir	---		---	Douglas fir, ponderosa pine
	Ponderosa pine	55	100	14	
275:					
Shaser	Douglas fir	60	50	43	Douglas fir, grand fir, ponderosa pine
	Grand fir	70	50	100	
	Ponderosa pine	85	100	---	
Chapot	Douglas fir	65	50	29	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	80	100	29	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
276:					
Skipeak	Douglas fir	69	50	57	Douglas fir, grand fir, lodgepole pine, subalpine fir
	Grand fir	---		---	
	Lodgepole pine	---		---	
	Subalpine fir	---		---	
	Western white pine	55	50	114	
277:					
Skipeak	Douglas fir	69	50	57	Douglas fir, grand fir, lodgepole pine, subalpine fir
	Grand fir	---		---	
	Lodgepole pine	---		---	
	Subalpine fir	---		---	
	Western white pine	55	50	114	
Line	Douglas fir	70	50	57	Douglas fir, lodgepole pine, western hemlock, western redcedar
	Lodgepole pine	---		---	
	Western hemlock	60	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
278:					
Soda	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	
279:					
Soda	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	
280:					
Soda	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	
281:					
Soda	Douglas fir	---		---	Pacific silver fir, grand fir, western hemlock
	Grand fir	60	50	72	
	Pacific silver fir	---		---	
	Western hemlock	60	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
282:					
Soda	Douglas fir	---		---	Pacific silver fir, grand fir, western hemlock
	Grand fir	60	50	72	
	Pacific silver fir	---		---	
	Western hemlock	60	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
283:					
Soda	Douglas fir	---		---	Pacific silver fir, grand fir, western hemlock
	Grand fir	60	50	72	
	Pacific silver fir	---		---	
	Western hemlock	60	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
Rock outcrop.					
284:					
Soda	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	
Rock outcrop.					
285:					
Soda	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	
Soda, cold	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	
286:					
Soda	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
286:					
Soda, cold	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	
287:					
Soda	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	
Soda, cold	Douglas fir	---		---	Engelmann spruce, Pacific silver fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce	---		---	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	60	100	43	
	Western white pine	---		---	
Rock outcrop.					
288:					
Sodacreek	Douglas fir	75	50	72	Douglas fir, grand fir
	Grand fir	90	50	129	
	Lodgepole pine	85	100	100	
	Western redcedar	---		---	
289:					
Sodacreek	Douglas fir	75	50	72	Douglas fir, grand fir
	Grand fir	90	50	129	
	Lodgepole pine	85	100	100	
	Western redcedar	---		---	
Rock outcrop.					
290:					
Spodic Vitrixerands	Douglas fir	75	50	57	Douglas fir, grand fir
	Grand fir	100	50	72	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western hemlock	---		---	
	Western redcedar	---		---	
	Western white pine	---		---	
Saska	Douglas fir	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce	---		---	
	Grand fir	80	50	114	
	Lodgepole pine	---		---	
	Ponderosa pine	---		---	
	Western redcedar	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
291:					
Spodic Vitrixerands-----	Douglas fir---------	75	50	57	Douglas fir, grand fir
	Grand fir-----------	100	50	72	
	Lodgepole pine------	---		---	
	Ponderosa pine------	---		---	
	Western hemlock-----	---		---	
	Western redcedar----	---		---	
	Western white pine--	---		---	
Saska-------------------	Douglas fir---------	63	50	43	Douglas fir, grand fir, ponderosa pine
	Engelmann spruce----	---		---	
	Grand fir-----------	80	50	114	
	Lodgepole pine------	---		---	
	Ponderosa pine------	---		---	
	Western redcedar----	---		---	
292:					
Stemilt-----------------	Douglas fir---------	---		---	Douglas fir, ponderosa pine
	Ponderosa pine------	89	100	86	
	Western larch-------	---		---	
293:					
Stemilt-----------------	Douglas fir---------	---		---	Douglas fir, ponderosa pine
	Ponderosa pine------	89	100	86	
	Western larch-------	---		---	
294:					
Surgh-------------------	Douglas fir---------	50	50	29	Douglas fir, grand fir, subalpine fir
	Grand fir-----------	60	50	72	
	Lodgepole pine------	75	100	72	
	Subalpine fir-------	60	100	43	
	Western larch-------	---		---	
295:					
Surgh-------------------	Douglas fir---------	50	50	29	Douglas fir, grand fir, subalpine fir
	Grand fir-----------	60	50	72	
	Lodgepole pine------	75	100	72	
	Subalpine fir-------	60	100	43	
	Western larch-------	---		---	
296:					
Surgh-------------------	Douglas fir---------	50	50	29	Douglas fir, grand fir, subalpine fir
	Grand fir-----------	60	50	72	
	Lodgepole pine------	75	100	72	
	Subalpine fir-------	60	100	43	
	Western larch-------	---		---	
297:					
Surgh-------------------	Douglas fir---------	50	50	29	Douglas fir, grand fir, lodgepole pine, subalpine fir
	Engelmann spruce----	---		---	
	Grand fir-----------	60	50	72	
	Lodgepole pine------	75	100	72	
	Subalpine fir-------	60	100	43	
	Western redcedar----	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
297:					
Wedge	Douglas fir	73	50	---	Douglas fir, Pacific silver fir
	Grand fir	---		---	
	Lodgepole pine	60	100	---	
	Pacific silver fir	---		---	
	Subalpine fir	80	100	---	
	Western hemlock	100	100	---	
	Western white pine	---		---	
298:					
Swakane	Douglas fir	---		---	Ponderosa pine
	Ponderosa pine	60	100	14	
299:					
Swakane	Douglas fir	---		---	Ponderosa pine
	Ponderosa pine	60	100	14	
300:					
Swakane	Douglas fir	---		---	Ponderosa pine
	Ponderosa pine	60	100	14	
Rock outcrop.					
301:					
Swakane	Douglas fir	---		---	Ponderosa pine
	Ponderosa pine	60	100	14	
Rock outcrop.					
302:					
Switchback	Douglas fir	60	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	57	
303:					
Switchback	Douglas fir	60	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	57	
304:					
Switchback	Douglas fir	60	50	29	Douglas fir, ponderosa pine
	Ponderosa pine	70	100	57	
305. Taneum					
306:					
Thow	Douglas fir	95	50	100	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Lodgepole pine	---		---	
	Ponderosa pine	95	100	43	
307:					
Thow	Douglas fir	88	50	---	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
308:					
Thow	Douglas fir	88	50	---	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	---	
309:					
Thow	Douglas fir	88	50	---	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Lodgepole pine	---		---	
	Ponderosa pine	75	100	---	
Domkey	Douglas fir	70	50	57	Douglas fir, ponderosa pine
	Grand fir	---		---	
	Ponderosa pine	70	100	43	
Rock outcrop.					
310:					
Thowson	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	
311:					
Thowson	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	
312:					
Thowson	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	
313:					
Thowson	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	
314:					
Thowson	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	
315:					
Thowson	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	
Rock outcrop.					
316:					
Thowson	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	
Rock outcrop.					
317:					
Thowson	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	
Rock outcrop.					
318:					
Thowson, stony	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Potential productivity: Site index	Potential productivity: Base age	Potential productivity: Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
318:					
Thowson	Douglas fir	49	50	29	Ponderosa pine
	Ponderosa pine	50	100	29	
Rock outcrop.					
319:					
Tillicum	Douglas fir	65	50	57	Douglas fir, western larch
	Grand fir	85	50	100	
	Lodgepole pine	---		---	
	Western larch	100	50	---	
320:					
Tillicum	Douglas fir	65	50	57	Douglas fir, western larch
	Grand fir	85	50	100	
	Lodgepole pine	---		---	
	Western larch	---		---	
321:					
Tillicum	Douglas fir	65	50	57	Douglas fir, western larch
	Grand fir	85	50	100	
	Lodgepole pine	---		---	
	Western larch	---		---	
322:					
Tillmont	Douglas fir	90	50	72	Douglas fir, ponderosa pine
	Grand fir	120	50	---	
	Lodgepole pine	---		---	
	Ponderosa pine	125	100	114	
323:					
Tillmont	Douglas fir	90	50	72	Douglas fir, ponderosa pine
	Grand fir	120	50	---	
	Lodgepole pine	---		---	
	Ponderosa pine	125	100	114	
324:					
Tillmont	Douglas fir	90	50	72	Douglas fir, ponderosa pine
	Grand fir	120	50	---	
	Lodgepole pine	---		---	
	Ponderosa pine	125	100	114	
Inkler	Douglas fir	55	50	29	Douglas fir, grand fir
	Grand fir	75	50	72	
	Ponderosa pine	---		---	
325:					
Tiptop	Douglas fir	---		---	Lodgepole pine, subalpine fir, western larch
	Grand fir	60	50	43	
	Lodgepole pine	90	100	114	
	Subalpine fir	75	100	72	
	Western larch	---		---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	Yrs	Cu ft/ac/yr	
326:					
Tiptop	Douglas fir	---		---	Lodgepole pine, subalpine fir, western larch
	Grand fir	60	50	43	
	Lodgepole pine	90	100	114	
	Subalpine fir	75	100	72	
	Western larch	---		---	
	Western white pine	---		---	
Naxing	Douglas fir	65	50	43	Engelmann spruce, lodgepole pine, subalpine fir, western larch
	Engelmann spruce	75	100	72	
	Grand fir	---		---	
	Lodgepole pine	65	100	57	
	Subalpine fir	75	100	72	
	Western larch	45	50	57	
	Whitebark pine	---		---	
327:					
Totem	Douglas fir	80	50	86	Douglas fir, lodgepole pine, western hemlock
	Engelmann spruce	90	100	---	
	Grand fir	115	50	186	
	Lodgepole pine	---		---	
	Pacific silver fir	100	100	---	
	Subalpine fir	---		---	
	Western hemlock	50	100	86	
	Western redcedar	---		---	
	Western white pine	---		---	
328:					
Totem	Douglas fir	80	50	86	Douglas fir, lodgepole pine, western hemlock
	Engelmann spruce	90	100	---	
	Grand fir	115	50	186	
	Lodgepole pine	---		---	
	Pacific silver fir	100	100	---	
	Subalpine fir	---		---	
	Western hemlock	50	100	86	
	Western redcedar	---		---	
	Western white pine	---		---	
329:					
Totem	Douglas fir	80	50	86	Douglas fir, lodgepole pine, western hemlock
	Engelmann spruce	90	100	---	
	Grand fir	115	50	186	
	Lodgepole pine	---		---	
	Pacific silver fir	100	100	---	
	Subalpine fir	---		---	
	Western hemlock	50	100	86	
	Western redcedar	---		---	
	Western white pine	---		---	
330:					
Totem	Douglas fir	80	50	86	Douglas fir, lodgepole pine, western hemlock
	Engelmann spruce	90	100	---	
	Grand fir	115	50	186	
	Lodgepole pine	---		---	
	Pacific silver fir	100	100	---	
	Subalpine fir	---		---	
	Western hemlock	50	100	86	
	Western redcedar	---		---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	*Yrs*	*Cu ft/ac/yr*	
330:					
Chiwaukum	Douglas fir	60	50	43	Douglas fir, lodgepole pine
	Lodgepole pine	80	100	86	
	Western white pine	60	50	114	
331. Treen					
332: Treen.					
Klapatche	Douglas fir	---		---	Douglas fir, Engelmann spruce, subalpine fir, western hemlock
	Pacific silver fir	---		---	
	Subalpine fir	65	100	57	
	Western hemlock	---		86	
	Western larch	---		---	
	Western white pine	---		---	
333. Tronsen					
334. Tronsen					
335. Tyee					
336. Tyee					
337. Tyee					
338: Tyee.					
Bisping	Douglas fir	65	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	75	100	43	
339. Typic Cryaquands					
340:					
Vabbing	Douglas fir	73	50	72	Douglas fir, Pacific silver fir, western hemlock
	Grand fir	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	86	
	Western redcedar	---		---	
	Western white pine	---		---	
341:					
Vabbing	Douglas fir	73	50	72	Douglas fir, Pacific silver fir, western hemlock
	Grand fir	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	86	
	Western redcedar	---		---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
342:					
Vabbing	Douglas fir	73	50	72	Douglas fir, Pacific silver fir, western hemlock
	Grand fir	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	86	
	Western redcedar	---		---	
	Western white pine	---		---	
Gilpar	Douglas fir	---		---	Douglas fir, Engelmann spruce, Pacific silver fir, noble fir, subalpine fir, western hemlock
	Engelmann spruce	---		---	
	Pacific silver fir	---		---	
	Subalpine fir	---		---	
	Western hemlock	100	100	143	
	Western white pine	---		---	
343:					
Vabbing	Douglas fir	73	50	72	Douglas fir, Pacific silver fir, western hemlock
	Grand fir	---		---	
	Pacific silver fir	---		---	
	Western hemlock	85	100	86	
	Western redcedar	---		---	
	Western white pine	---		---	
Rock outcrop.					
344:					
Vabus	Douglas fir	63	50	43	Douglas fir, Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		100	
	Subalpine fir	---		---	
	Western hemlock	92	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
345:					
Vabus	Douglas fir	63	50	43	Douglas fir, Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		100	
	Subalpine fir	---		---	
	Western hemlock	92	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
346:					
Vabus	Douglas fir	63	50	43	Douglas fir, Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		100	
	Subalpine fir	---		---	
	Western hemlock	92	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
Chinkmin	Douglas fir	75	50	72	Douglas fir, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	100	100	100	
	Western redcedar	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity				Trees to manage
	Common trees	Site index	Base age	Volume of wood fiber (CMAI)	
		Ft	*Yrs*	*Cu ft/ac/yr*	
347:					
Vabus	Douglas fir	63	50	43	Douglas fir, Pacific silver fir, western hemlock
	Engelmann spruce	---		---	
	Mountain hemlock	---		---	
	Pacific silver fir	---		100	
	Subalpine fir	---		---	
	Western hemlock	92	100	100	
	Western redcedar	---		---	
	Western white pine	---		---	
Chinkmin	Douglas fir	75	50	72	Douglas fir, western hemlock
	Mountain hemlock	---		---	
	Pacific silver fir	---		---	
	Western hemlock	100	100	100	
	Western redcedar	---		---	
348:					
Varelum	Douglas fir	85	50	72	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
349:					
Varelum	Douglas fir	85	50	72	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
350:					
Varelum	Douglas fir	85	50	72	Douglas fir, ponderosa pine
	Ponderosa pine	60	100	43	
351:					
Varelum	Douglas fir	60	50	43	Douglas fir, ponderosa pine
	Ponderosa pine	85	100	72	
352:					
Vitricryands	Engelmann spruce	---		---	Lodgepole pine, subalpine fir
	Lodgepole pine	---		---	
	Mountain hemlock	---		---	
	Subalpine fir	60	100	43	
	Whitebark pine	---		---	
353:					
Vitricryands	Engelmann spruce	---		---	Lodgepole pine, subalpine fir
	Lodgepole pine	---		---	
	Mountain hemlock	---		---	
	Subalpine fir	60	100	43	
	Whitebark pine	---		---	
Rock outcrop.					
354.					
Wagberg					
355.					
Wagberg					
356.					
Wagberg					
Wagberg, south					

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
357:					
Wagberg.					
Swakane	Douglas fir	---		---	Ponderosa pine
	Ponderosa pine	60	100	14	
Rock outcrop.					
358:					
Wedge	Douglas fir	73	50	---	Douglas fir, Pacific silver fir
	Grand fir	---		---	
	Lodgepole pine	60	100	---	
	Pacific silver fir	---		---	
	Subalpine fir	80	100	---	
	Western hemlock	100	100	---	
	Western white pine	---		---	
359:					
Wedge	Douglas fir	73	50	---	Douglas fir, Pacific silver fir
	Grand fir	---		---	
	Lodgepole pine	60	100	---	
	Pacific silver fir	---		---	
	Subalpine fir	80	100	---	
	Western hemlock	100	100	---	
	Western white pine	---		---	
360:					
Wedge	Douglas fir	---		---	---
	Grand fir	---		---	
	Lodgepole pine	55	100	---	
	Subalpine fir	65	100	---	
361:					
Wedge	Douglas fir	---		---	---
	Grand fir	---		---	
	Lodgepole pine	55	100	---	
	Subalpine fir	65	100	---	
362:					
Wedge	Douglas fir	73	50	---	Douglas fir, Pacific silver fir
	Grand fir	---		---	
	Lodgepole pine	60	100	---	
	Pacific silver fir	---		---	
	Subalpine fir	80	100	---	
	Western hemlock	100	100	---	
	Western white pine	---		---	
Typic Cryaquands.					
363:					
Wedge	Douglas fir	73	50	---	Douglas fir, Pacific silver fir
	Grand fir	---		---	
	Lodgepole pine	60	100	---	
	Pacific silver fir	---		---	
	Subalpine fir	80	100	---	
	Western hemlock	100	100	---	
	Western white pine	---		---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Base age	Volume of wood fiber (CMAI)	Trees to manage
		Ft	Yrs	Cu ft/ac/yr	
363:					
Wedge, cold	Douglas fir	---		---	---
	Grand fir	---		---	
	Lodgepole pine	55	100	---	
	Subalpine fir	65	100	---	
364:					
Wedgemont	Douglas fir	---		---	Douglas fir,
	Engelmann spruce	---		---	Engelmann spruce,
	Lodgepole pine	55	100	43	subalpine fir
	Subalpine fir	70	100	57	
365:					
Wilma	Douglas fir	53	50	29	Douglas fir,
	Ponderosa pine	75	100	29	ponderosa pine
366:					
Wilma	Douglas fir	53	50	29	Douglas fir,
	Ponderosa pine	75	100	29	ponderosa pine
Rock outcrop.					
367:					
Yaxing	Douglas fir	60	50	43	Douglas fir,
	Ponderosa pine	85	100	72	ponderosa pine
368:					
Yaxing	Douglas fir	60	50	43	Douglas fir,
	Ponderosa pine	85	100	72	ponderosa pine
369. Yaxon					
370. Yaxon					
371. Yaxon					
372. Yaxon					
373. Yaxon					
374:					
Zeb	Douglas fir	75	50	72	Douglas fir,
	Grand fir	90	50	129	ponderosa pine
	Ponderosa pine	90	100	57	
W. Water					

Table 8a.--Forest Management (Part I)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents---	75	Severe		Moderately suited		Severe	
		Wetness	1.00	Flooding	0.50	Strength	1.00
		Flooding	0.50	Strength	0.50		
		Strength	0.50				
2:							
Almac---------------	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Strength	0.50				
3:							
Almac---------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
4:							
Almac---------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
5:							
Almac---------------	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Azwell--------------	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
6:							
Almac---------------	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Azwell--------------	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
7:							
Almac---------------	55	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	25	Not rated		Not rated		Not rated	
8:							
Alnult--------------	70	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Reggad--------------	15	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
				Strength	1.00		

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9:							
Altapeak------------	85	Moderate		Moderately suited		Slight	
		Slope	0.50	Slope	0.50	Strength	0.10
		Sandiness	0.50				
10:							
Altapeak------------	75	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
11:							
Altapeak------------	75	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
12:							
Altapeak------------	80	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
13:							
Altapeak------------	40	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Alnult--------------	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
14:							
Altapeak------------	40	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Alnult--------------	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
15:							
Altapeak------------	40	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Alnult--------------	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
16:							
Anatone-------------	60	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Blewett-------------	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		
17:							
Anatone-------------	70	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
18:							
Andic Cryochrepts---	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50	Strength	0.50		

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
19:							
Andic Cryumbrepts---	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
20:							
Andic Cryumbrepts---	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
21:							
Andic Cryumbrepts---	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Haplocryods---------	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
22:							
Andic Cryumbrepts---	55	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	20	Not rated		Not rated		Not rated	
23:							
Andic Cryumbrepts---	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	30	Not rated		Not rated		Not rated	
24:							
Andic Haplumbrepts--	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	30	Not rated		Not rated		Not rated	
25:							
Angle---------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
26:							
Aquic Cryumprepts---	75	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Strength	0.50
		Wetness	1.00	Wetness	0.50		
27:							
Ardening------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
28:							
Ardenmont-----------	85	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
29:							
Ardenmont-----------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
30:							
Ardenmont-----------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
31:							
Ardenmont-----------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Swakane-------------	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
32:							
Ardenvoir-----------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
33:							
Ardenvoir-----------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
34:							
Azwell--------------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
35:							
Bagmont-------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
36:							
Bigcreek------------	85	Slight		Well suited		Moderate	
						Strength	0.50
37:							
Billyridge----------	75	Slight		Well suited		Moderate	
						Strength	0.50
38:							
Billyridge----------	75	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50
39:							
Billyridge----------	75	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
40:							
Bisping-------------	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50
41:							
Bisping-------------	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
42:							
Bisping-------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43:							
Bjork----------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
44:							
Bjork----------------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
45:							
Blag----------------	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Cle Elum------------	25	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
46:							
Blag----------------	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	30	Not rated		Not rated		Not rated	
47:							
Blewett-------------	65	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
48:							
Borland-------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
49:							
Borland-------------	60	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
50:							
Brief---------------	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50
51:							
Brisky--------------	65	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52:							
Burch	85	Moderate		Moderately suited		Severe	
		Strength	0.50	Strength	0.50	Strength	1.00
53:							
Burnscreek	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
54:							
Burrant	85	Moderate		Moderately suited		Severe	
		Strength	0.50	Strength	0.50	Strength	1.00
55:							
Burrant	80	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
56:							
Cashmont	80	Slight		Well suited		Moderate	
						Strength	0.50
57:							
Cashmont	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
58:							
Chapot	90	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50	Strength	0.50		
59:							
Chinkmin	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
60:							
Chinkmin	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
61:							
Chinkmin	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
Altapeak	30	Moderate		Moderately suited		Slight	
		Slope	0.50	Slope	0.50	Strength	0.10
		Sandiness	0.50				
62:							
Chinkmin	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Altapeak	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
63:							
Chiwaukum	90	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
64:							
Chiwaukum-----------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
65:							
Chiwaukum-----------	75	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
66:							
Chiwaukum-----------	80	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Slope	0.50	Strength	0.50
		Slope	0.50				
67:							
Chiwaukum-----------	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
Chiwaukum, south----	35	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
68:							
Chiwaukum-----------	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Chiwaukum, south----	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
69:							
Chiwawa-------------	85	Slight		Well suited		Moderate	
						Strength	0.50
70:							
Choralmont, till substratum---------	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Choralmont----------	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
71:							
Choralmont----------	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
72:							
Choralmont----------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
73:							
Choralmont----------	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
74:							
Choralmont----------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75:							
Choralmont	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Limking	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
76:							
Chumstick	75	Severe		Moderately suited		Moderate	
		Restrictive layer	1.00	Slope	0.50	Strength	0.50
		Slope	0.50				
77:							
Chumstick	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
78:							
Chumstick	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
79:							
Cle Elum	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
80:							
Cle Elum	75	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
81:							
Coopmont	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
82:							
Coopmont	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
83:							
Cowiche	45	Moderate		Moderately suited		Severe	
		Strength	0.50	Slope	0.50	Strength	1.00
				Strength	0.50		
Cowiche, very deep	40	Moderate		Moderately suited		Severe	
		Strength	0.50	Slope	0.50	Strength	1.00
				Strength	0.50		
84:							
Cowiche	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
Cowiche, very deep	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
85:							
Cryomont	80	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Strength	0.50
		Sandiness	0.50				
86:							
Cryomont	75	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
87:							
Cryomont	40	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Strength	0.50
		Stoniness	1.00				
		Sandiness	0.50				
Cryomont, fan	35	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
88:							
Culving	65	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
89:							
Culvop	85	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
90:							
Devore	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
91:							
Dinkelman	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
92:							
Dinkelman	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
93:							
Dinkelman	55	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	25	Not rated		Not rated		Not rated	
94:							
Dinkels	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
95:							
Dinkels	90	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Restrictive layer	0.50				
96:							
Dinkels	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
97:							
Domkey	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
98:							
Domkey	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
99:							
Domkey	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
McCree	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
100:							
Dragoon	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
101:							
Dragoon	75	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
102:							
Entiat	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
103:							
Entiat	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	25	Not rated		Not rated		Not rated	
104:							
Entic Haplumbrepts	90	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
105:							
Esmeralda	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
106:							
Esmeralda	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	35	Not rated		Not rated		Not rated	

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107:							
Fears	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
108:							
Fears	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Devore	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
109:							
Fernow	80	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
110:							
Fernow	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
111:							
Fernow	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
Serene	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
112:							
Fluvaquents	80	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Strength	1.00
		Strength	0.50	Wetness	1.00		
				Strength	0.50		
113:							
Georgecreek	80	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50
114:							
Georgecreek	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Strength	0.50				
115:							
Georgecreek	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
116:							
Georgecreek	50	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50
Dragoon	30	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
117:							
Georgecreek	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Strength	0.50				
Dragoon	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Strength	0.50				
118:							
Gilpar	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
119:							
Gilpar	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Nimue	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
120:							
Gilpar	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Nimue	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
121:							
Gilpar	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	25	Not rated		Not rated		Not rated	
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
124:							
Goffpeak	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Fears	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
125:							
Haplocryods, cold	45	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Strength	1.00
		Slope	0.50	Strength	0.50		
Haplocryods, stony	30	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
126:							
Haplocryods	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Andic Cryochrepts	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50	Strength	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
127:							
Haploxerolls	80	Moderate		Moderately suited		Slight	
		Slope	0.50	Slope	0.50	Strength	0.10
128:							
Haploxerolls	80	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
129:							
Humicryods	40	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
				Strength	0.50		
Andic Cryumbrepts	35	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
130:							
Humicryods	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Andic Cryochrepts	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50	Strength	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
131:							
Humicryods	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Andic Cryumbrepts	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
132:							
Hyprairie	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
133:							
Hyprairie	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
134:							
Hyprairie-----------	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
Oldbutte------------	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
135:							
Icicle, south-------	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Icicle--------------	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
136:							
Icicle--------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
137:							
Icicle--------------	80	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Slope	0.50	Strength	0.50
		Slope	0.50				
138:							
Icicle--------------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
139:							
Icicle--------------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
140:							
Icicle--------------	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Chumstick-----------	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	25	Not rated		Not rated		Not rated	
141:							
Icicle--------------	35	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Chumstick-----------	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	25	Not rated		Not rated		Not rated	
142:							
Inkler--------------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
143:							
Isella--------------	40	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
143:							
Fernow	35	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
144:							
Isella	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
Fernow	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
145:							
Isella	40	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
Nimue	35	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
146:							
Isella	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
Nimue	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
147:							
Kingmont	90	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
148:							
Kladnick	85	Slight		Well suited		Moderate	
						Strength	0.50
149:							
Kladnick	75	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
150:							
Kladnick	80	Severe		Moderately suited		Slight	
		Stoniness	1.00	Sandiness	0.50	Strength	0.10
		Sandiness	0.50	Slope	0.50		
151:							
Klapatche	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Altapeak	35	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
152:							
Kloochman	80	Moderate		Moderately suited		Moderate	
		Restrictive layer	0.50	Slope	0.50	Strength	0.50
		Slope	0.50				

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
153:							
Kloochman	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
154:							
Kloochman	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
155:							
Kloochman	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Inkler	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
156:							
Kloochman	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Inkler	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
157:							
Kloochman	70	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
158:							
Limking	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
159:							
Limking	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Coopmont	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
160:							
Limking	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Coopmont	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
161:							
Limking	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Coopmont	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
161:							
Rock outcrop--------	20	Not rated		Not rated		Not rated	
162:							
Limking-------------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
163:							
Line----------------	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
164:							
Line----------------	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
165:							
Line----------------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
166:							
Line----------------	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
Vabbing-------------	35	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50	Sandiness	0.50		
167:							
Loneridge-----------	85	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
				Strength	0.50		
168:							
Loneridge-----------	85	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
169:							
Loneridge-----------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
170:							
Macreeing-----------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
171:							
Macreeing-----------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
172:							
Macreeing-----------	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
172:							
Rock outcrop--------	30	Not rated		Not rated		Not rated	
173:							
Mansonia------------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
174:							
Mansonia------------	50	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Strength	0.50
		Restrictive layer	0.50				
Swakane-------------	20	Severe		Poorly suited		Moderate	
		Restrictive layer	1.00	Slope	1.00	Strength	0.50
		Slope	0.50				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
175:							
Mansonia------------	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Swakane-------------	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	30	Not rated		Not rated		Not rated	
176:							
Marmont-------------	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50
177:							
Marmont-------------	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
178:							
Marmont-------------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
179:							
McCree--------------	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Restrictive layer	0.50				
180:							
McCree--------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
181:							
McCree--------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
182:							
McCree--------------	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Palmich-------------	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
183:							
McCree	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Palmont	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
Rock outcrop	15	Not rated		Not rated		Not rated	
184:							
McCree	55	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	25	Not rated		Not rated		Not rated	
185:							
Mippon	75	Moderate		Moderately suited		Moderate	
		Flooding	0.50	Flooding	0.50	Strength	0.50
				Wetness	0.50		
186:							
Mippon	75	Moderate		Moderately suited		Moderate	
		Flooding	0.50	Flooding	0.50	Strength	0.50
		Sandiness	0.50	Sandiness	0.50		
				Wetness	0.50		
187:							
Mippon	75	Moderate		Moderately suited		Slight	
		Flooding	0.50	Flooding	0.50	Strength	0.10
		Sandiness	0.50	Sandiness	0.50		
				Wetness	0.50		
188:							
Morical	80	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50
189:							
Morical	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
190:							
Morical	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
191:							
Morical	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Dragoon	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
192:							
Morical	65	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
Dragoon	20	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Strength	0.50				

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
193:							
Morical	65	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Dragoon	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
194:							
Morical	65	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Dragoon	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
195:							
Mountaineer	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
196:							
Mountaineer	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
197:							
Mountaineer	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Tillicum	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
198:							
Nahahum	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
199:							
Nahahum	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
Taneum	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
200:							
Nard	75	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Strength	0.50				
201:							
Nard	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
202:							
Nard	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
Blag	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
203:							
Nard	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
Brisky	35	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
204:							
Nardine	85	Moderate		Moderately suited		Severe	
		Strength	0.50	Strength	0.50	Strength	1.00
205:							
Nardmont	75	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
206:							
Nardmont	75	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
207:							
Natapoc	80	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Slope	0.50	Strength	0.50
		Slope	0.50				
208:							
Natapoc	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
209:							
Natapoc	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Thow	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
210:							
Naxing	75	Moderate		Moderately suited		Slight	
		Slope	0.50	Slope	0.50	Strength	0.10
211:							
Naxing	75	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
212:							
Newbell	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
213:							
Nimue	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
214:							
Nimue	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
215:							
Nimue	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
216:							
Nimue	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Nimue, dry	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
217:							
Nimue, dry	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Nimue	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
218:							
Oldbutte	85	Moderate		Moderately suited		Severe	
		Strength	0.50	Strength	0.50	Strength	1.00
219:							
Oldbutte	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
220:							
Palmich	90	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
221:							
Palmich	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
222:							
Palmich	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
223:							
Palmich	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
McCree	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
224:							
Palmich	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
McCree	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
225:							
Palmich	65	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
226:							
Palmont	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
227:							
Palmont	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
228:							
Palmont	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
229:							
Palmont	55	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
230:							
Ramparter	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
231:							
Ramparter	85	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Sandiness	0.50				
232:							
Ramparter	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
233:							
Ramparter	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
234:							
Ramparter	85	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Sandiness	0.50	Strength	0.50		

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
235:							
Ramparter-----------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
236:							
Ramparter-----------	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Wilma---------------	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
237:							
Reggad--------------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
				Strength	1.00		
238:							
Reggad--------------	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
				Strength	1.00		
Serene--------------	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
239:							
Rock outcrop--------	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Blewett-------------	25	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		
241:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Borland-------------	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
242:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	25	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Icicle--------------	15	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
243:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
243:							
Icicle	15	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
244:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Rubble land	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop	35	Not rated		Not rated		Not rated	
Rubble land	25	Not rated		Not rated		Not rated	
Serene	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
246:							
Rubble land	65	Not rated		Not rated		Not rated	
Rock outcrop	20	Not rated		Not rated		Not rated	
247:							
Safety	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
248:							
Safety	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
249:							
Safety	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
250:							
Safety	70	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
251:							
Saska	75	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
252:							
Saska	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
253:							
Saska	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
254:							
Saska	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
255:							
Saska---------------	85	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Slope	0.50	Strength	0.50
		Slope	0.50				
256:							
Saska---------------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
257:							
Saska---------------	65	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	20	Not rated		Not rated		Not rated	
258:							
Saska---------------	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
Saska, bouldery-----	35	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Slope	0.50	Strength	0.50
		Slope	0.50				
259:							
Saska, south--------	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
Saska---------------	35	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Slope	0.50	Strength	0.50
		Slope	0.50				
260:							
Saska---------------	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Saska, bouldery-----	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
261:							
Saska---------------	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Saska, bouldery-----	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
262:							
Saska, south--------	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Saska---------------	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
263:							
Saydab	80	Moderate		Moderately suited		Slight	
		Restrictive layer	0.50	Slope	0.50	Strength	0.10
		Slope	0.50				
264:							
Scotties	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
265:							
Serene	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
266:							
Serene	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	25	Not rated		Not rated		Not rated	
267:							
Serpen	85	Moderate		Moderately suited		Slight	
		Slope	0.50	Slope	0.50	Strength	0.10
		Restrictive layer	0.50				
268:							
Serpen	80	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
269:							
Shadypass	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
				Sandiness	0.50		
270:							
Shamel	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
271:							
Shamel	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
272:							
Shamel	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
Rock outcrop	20	Not rated		Not rated		Not rated	
273:							
Shaser	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Blewett	40	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
274:							
Shaser	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Brisky	40	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
275:							
Shaser	60	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
Chapot	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
276:							
Skipeak	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
277:							
Skipeak	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
Line	35	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
278:							
Soda	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
279:							
Soda	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
280:							
Soda	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
281:							
Soda	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
282:							
Soda	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
283:							
Soda	65	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
284:							
Soda	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
285:							
Soda	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
Soda, cold	35	Severe		Moderately suited		Moderate	
		Stoniness	1.00	Slope	0.50	Strength	0.50
		Slope	0.50				
		Sandiness	0.50				
286:							
Soda	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Soda, cold	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
287:							
Soda	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Soda, cold	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
288:							
Sodacreek	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Wetness	0.50	Wetness	0.50		
289:							
Sodacreek	70	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Wetness	0.50	Wetness	0.50		
Rock outcrop	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Strength	0.50	Wetness	0.50		
Saska	30	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
291:							
Spodic Vitrixerands	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50	Wetness	0.50		
Saska	35	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
292:							
Stemilt-------------	80	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
293:							
Stemilt-------------	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
294:							
Surgh---------------	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Restrictive layer	0.50				
		Sandiness	0.50				
295:							
Surgh---------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
296:							
Surgh---------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
297:							
Surgh---------------	40	Severe		Moderately suited		Slight	
		Stoniness	1.00	Slope	0.50	Strength	0.10
		Slope	0.50				
Wedge---------------	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
298:							
Swakane-------------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
299:							
Swakane-------------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
300:							
Swakane-------------	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	25	Not rated		Not rated		Not rated	
301:							
Swakane-------------	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	35	Not rated		Not rated		Not rated	
302:							
Switchback----------	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Strength	0.50				

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
303:							
Switchback	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
304:							
Switchback	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
305:							
Taneum	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
306:							
Thow	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
307:							
Thow	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
308:							
Thow	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
309:							
Thow	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Domkey	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
310:							
Thowson	85	Slight		Well suited		Moderate	
						Strength	0.50
311:							
Thowson	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Strength	0.50
312:							
Thowson	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
313:							
Thowson	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
314:							
Thowson	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
315:							
Thowson	60	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
315:							
Rock outcrop	15	Not rated		Not rated		Not rated	
316:							
Thowson	60	Severe Slope	 1.00	Poorly suited Slope	 1.00	Moderate Strength	 0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
317:							
Thowson	50	Severe Slope	 1.00	Poorly suited Slope	 1.00	Moderate Strength	 0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
318:							
Thowson, stony	30	Severe Slope	 1.00	Poorly suited Slope	 1.00	Moderate Strength	 0.50
Thowson	30	Severe Slope	 1.00	Poorly suited Slope	 1.00	Moderate Strength	 0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
319:							
Tillicum	75	Severe Slope	 1.00	Poorly suited Slope	 1.00	Moderate Strength	 0.50
320:							
Tillicum	85	Moderate Slope Restrictive layer	 0.50 0.50	Moderately suited Slope	 0.50	Moderate Strength	 0.50
321:							
Tillicum	85	Severe Slope	 1.00	Poorly suited Slope	 1.00	Moderate Strength	 0.50
322:							
Tillmont	75	Moderate Slope Restrictive layer Sandiness	 0.50 0.50 0.50	Moderately suited Slope	 0.50	Moderate Strength	 0.50
323:							
Tillmont	75	Severe Slope	 1.00	Poorly suited Slope	 1.00	Moderate Strength	 0.50
324:							
Tillmont	40	Severe Slope	 1.00	Poorly suited Slope	 1.00	Moderate Strength	 0.50
Inkler	35	Severe Slope	 1.00	Poorly suited Slope	 1.00	Moderate Strength	 0.50
325:							
Tiptop	85	Severe Slope	 1.00	Poorly suited Slope Sandiness	 1.00 0.50	Slight Strength	 0.10

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
326:							
Tiptop	40	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		
Naxing	35	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
327:							
Totem	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Strength	0.50				
		Sandiness	0.50				
328:							
Totem	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
329:							
Totem	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
330:							
Totem	60	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Chiwaukum	20	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
331:							
Treen	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
332:							
Treen	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Klapatche	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
333:							
Tronsen	80	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
				Strength	0.50		
334:							
Tronsen	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
				Strength	0.50		
335:							
Tyee	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
				Sandiness	0.50		
336:							
Tyee	85	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
337:							
Tyee	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
338:							
Tyee	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Bisping	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
		Strength	0.50				
339:							
Typic Cryaquands	80	Moderate		Moderately suited		Severe	
		Strength	0.50	Strength	0.50	Strength	1.00
				Wetness	0.50		
340:							
Vabbing	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50	Sandiness	0.50		
341:							
Vabbing	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
				Sandiness	0.50		
342:							
Vabbing	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
				Sandiness	0.50		
Gilpar	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
343:							
Vabbing	70	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
				Sandiness	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
344:							
Vabus	75	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
345:							
Vabus	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
346:							
Vabus	40	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
Chinkmin	35	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
347:							
Vabus	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Chinkmin	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
348:							
Varelum	85	Moderate		Moderately suited		Severe	
		Strength	0.50	Strength	0.50	Strength	1.00
349:							
Varelum	85	Moderate		Moderately suited		Severe	
		Strength	0.50	Slope	0.50	Strength	1.00
				Strength	0.50		
350:							
Varelum	85	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
351:							
Varelum	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
352:							
Vitricryands	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
353:							
Vitricryands	45	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
354:							
Wagberg	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
355:							
Wagberg	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
356:							
Wagberg	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Wagberg, south	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
357:							
Wagberg	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Swakane	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
358:							
Wedge---------------	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
359:							
Wedge---------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
360:							
Wedge---------------	80	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
		Sandiness	0.50				
361:							
Wedge---------------	80	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
362:							
Wedge---------------	60	Moderate		Moderately suited		Moderate	
		Sandiness	0.50	Slope	0.50	Strength	0.50
Typic Cryaquands----	30	Moderate		Moderately suited		Severe	
		Strength	0.50	Strength	0.50	Strength	1.00
				Slope	0.50		
				Wetness	0.50		
363:							
Wedge---------------	50	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Wedge, cold---------	30	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
364:							
Wedgemont-----------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
				Sandiness	0.50		
365:							
Wilma---------------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
366:							
Wilma---------------	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Strength	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
367:							
Yaxing--------------	80	Moderate		Moderately suited		Severe	
		Strength	0.50	Slope	0.50	Strength	1.00
				Strength	0.50		
368:							
Yaxing--------------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		

Table 8a.--Forest Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
369:							
Yaxon	85	Moderate		Moderately suited		Severe	
		Strength	0.50	Slope	0.50	Strength	1.00
				Strength	0.50		
370:							
Yaxon	85	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Strength	1.00
		Strength	0.50	Strength	0.50		
371:							
Yaxon	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
372:							
Yaxon	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
373:							
Yaxon	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Strength	1.00
		Strength	0.50	Strength	0.50		
374:							
Zeb	75	Moderate		Moderately suited		Moderate	
		Slope	0.50	Slope	0.50	Strength	0.50
W:							
Water	100	Not rated		Not rated		Not rated	

Table 8b.--Forest Management (Part II)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents---	75	Slight		Slight		Moderately suited	
						Flooding	0.50
						Strength	0.50
2:							
Almac---------------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
3:							
Almac---------------	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
4:							
Almac---------------	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
5:							
Almac---------------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Azwell--------------	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
6:							
Almac---------------	35	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Azwell--------------	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
7:							
Almac---------------	55	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	25	Not rated		Not rated		Not rated	
8:							
Alnult--------------	70	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Reggad--------------	15	Very severe		Severe		Poorly suited	
		High organic content	1.00	High organic content	1.00	Slope	1.00
						Sandiness	1.00
		Slope/erodibility	0.95	Slope/erodibility	0.95		
9:							
Altapeak------------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
10:							
Altapeak------------	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
11:							
Altapeak------------	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
12:							
Altapeak------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
13:							
Altapeak------------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Alnult--------------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
14:							
Altapeak------------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Alnult--------------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
15:							
Altapeak------------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Alnult--------------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
16:							
Anatone-------------	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Blewett-------------	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
17:							
Anatone-------------	70	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
18:							
Andic Cryochrepts---	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
19:							
Andic Cryumbrepts---	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20:							
Andic Cryumbrepts---	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
21:							
Andic Cryumbrepts---	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Haplocryods---------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
22:							
Andic Cryumbrepts---	55	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
23:							
Andic Cryumbrepts---	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
24:							
Andic Haplumbrepts--	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
25:							
Angle---------------	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
26:							
Aquic Cryumprepts---	75	Slight		Moderate		Poorly suited	
				Slope/erodibility	0.50	Flooding	1.00
						Wetness	0.50
27:							
Ardening------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
28:							
Ardenmont-----------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
29:							
Ardenmont-----------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
30:							
Ardenmont-----------	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
31:							
Ardenmont	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Swakane	35	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
32:							
Ardenvoir	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
33:							
Ardenvoir	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
34:							
Azwell	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
35:							
Bagmont	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
36:							
Bigcreek	85	Slight		Slight		Well suited	
37:							
Billyridge	75	Slight		Slight		Well suited	
38:							
Billyridge	75	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
39:							
Billyridge	75	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
40:							
Bisping	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
41:							
Bisping	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
42:							
Bisping	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
43:							
Bjork	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44:							
Bjork	55	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
45:							
Blag	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Cle Elum	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
46:							
Blag	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
47:							
Blewett	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
48:							
Borland	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
49:							
Borland	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
50:							
Brief	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
51:							
Brisky	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
52:							
Burch	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Strength	0.50
53:							
Burnscreek	80	Moderate		Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
54:							
Burrant	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Strength	0.50
55:							
Burrant	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
56:							
Cashmont	80	Slight		Slight		Well suited	
57:							
Cashmont	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
58:							
Chapot	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
59:							
Chinkmin	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
60:							
Chinkmin	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
61:							
Chinkmin	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
Altapeak	30	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
62:							
Chinkmin	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Altapeak	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
63:							
Chiwaukum	90	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
64:							
Chiwaukum	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
65:							
Chiwaukum	75	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
66:							
Chiwaukum	80	Moderate		Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
67:							
Chiwaukum-----------	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
Chiwaukum, south----	35	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
68:							
Chiwaukum-----------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Chiwaukum, south----	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
69:							
Chiwawa-------------	85	Slight		Slight		Well suited	
70:							
Choralmont, till substratum---------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Choralmont----------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
71:							
Choralmont----------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
72:							
Choralmont----------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
73:							
Choralmont----------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
74:							
Choralmont----------	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
75:							
Choralmont----------	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Limking-------------	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
76:							
Chumstick-----------	75	Moderate		Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	0.50
77:							
Chumstick-----------	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
78:							
Chumstick-----------	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79:							
Cle Elum	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
80:							
Cle Elum	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
81:							
Coopmont	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
82:							
Coopmont	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
83:							
Cowiche	45	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
Cowiche, very deep	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
84:							
Cowiche	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Cowiche, very deep	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
85:							
Cryomont	80	Slight		Slight		Poorly suited	
						Flooding	1.00
86:							
Cryomont	75	Moderate		Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	0.50
87:							
Cryomont	40	Slight		Slight		Poorly suited	
						Flooding	1.00
Cryomont, fan	35	Moderate		Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	0.50
88:							
Culving	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89:							
Culvop	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
90:							
Devore	60	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
91:							
Dinkelman	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
92:							
Dinkelman	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
93:							
Dinkelman	55	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
94:							
Dinkels	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
95:							
Dinkels	90	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
96:							
Dinkels	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
97:							
Domkey	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
98:							
Domkey	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
99:							
Domkey	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
McCree	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
100:							
Dragoon	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
101:							
Dragoon	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102:							
Entiat	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
103:							
Entiat	60	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
104:							
Entic Haplumbrepts	90	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
105:							
Esmeralda	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
106:							
Esmeralda	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	35	Not rated		Not rated		Not rated	
107:							
Fears	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
108:							
Fears	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Devore	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
109:							
Fernow	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
110:							
Fernow	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
111:							
Fernow	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Serene	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
112:							
Fluvaquents	80	Slight		Slight		Poorly suited	
						Flooding	1.00
						Wetness	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
113:							
Georgecreek	80	Slight		Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
114:							
Georgecreek	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
115:							
Georgecreek	80	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
116:							
Georgecreek	50	Slight		Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Dragoon	30	Slight		Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
117:							
Georgecreek	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Dragoon	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
118:							
Gilpar	80	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
119:							
Gilpar	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Nimue	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
120:							
Gilpar	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Nimue	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
121:							
Gilpar	60	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak	85	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
124:							
Goffpeak------------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Fears---------------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
125:							
Haplocryods, cold---	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Haplocryods, stony--	30	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
126:							
Haplocryods---------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Andic Cryochrepts---	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Rock outcrop--------	20	Not rated		Not rated		Not rated	
127:							
Haploxerolls--------	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
128:							
Haploxerolls--------	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
129:							
Humicryods----------	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
Andic Cryumbrepts---	35	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
130:							
Humicryods----------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Andic Cryochrepts---	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Rock outcrop--------	20	Not rated		Not rated		Not rated	
131:							
Humicryods----------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131:							
Andic Cryumbrepts---	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
132:							
Hyprairie-----------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
133:							
Hyprairie-----------	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
134:							
Hyprairie-----------	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Oldbutte------------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
135:							
Icicle, south-------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Icicle--------------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
136:							
Icicle--------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
137:							
Icicle--------------	80	Moderate		Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	0.50
138:							
Icicle--------------	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
139:							
Icicle--------------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
140:							
Icicle--------------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Chumstick-----------	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	25	Not rated		Not rated		Not rated	

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
141:							
Icicle	35	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Chumstick	25	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
142:							
Inkler	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
143:							
Isella	40	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope Strength	 0.50 0.50
Fernow	35	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope Strength	 0.50 0.50
144:							
Isella	40	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope Strength	 1.00 0.50
Fernow	35	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope Strength	 1.00 0.50
145:							
Isella	40	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope Strength	 0.50 0.50
Nimue	35	Moderate Slope/erodibility	 0.50	Moderate Slope/erodibility	 0.50	Moderately suited Slope	 0.50
146:							
Isella	40	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope Strength	 1.00 0.50
Nimue	35	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
147:							
Kingmont	90	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
148:							
Kladnick	85	Slight		Slight		Well suited	
149:							
Kladnick	75	Moderate Slope/erodibility	 0.50	Moderate Slope/erodibility	 0.50	Moderately suited Slope	 0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
150:							
Kladnick------------	80	Slight		Slight		Moderately suited	
						Sandiness	0.50
						Slope	0.50
151:							
Klapatche-----------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Altapeak------------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
152:							
Kloochman-----------	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
153:							
Kloochman-----------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
154:							
Kloochman-----------	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
155:							
Kloochman-----------	45	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Inkler--------------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
156:							
Kloochman-----------	35	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Inkler--------------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
157:							
Kloochman-----------	70	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
158:							
Limking-------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
159:							
Limking-------------	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Coopmont------------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
160:							
Limking	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Coopmont	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
161:							
Limking	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Coopmont	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
162:							
Limking	55	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
163:							
Line	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
164:							
Line	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
165:							
Line	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
166:							
Line	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
Vabbing	35	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Sandiness	0.50
167:							
Loneridge	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
168:							
Loneridge	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
169:							
Loneridge	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
170:							
Macreeing-----------	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
171:							
Macreeing-----------	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
172:							
Macreeing-----------	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
173:							
Mansonia------------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
174:							
Mansonia------------	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Swakane-------------	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
175:							
Mansonia------------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Swakane-------------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
176:							
Marmont-------------	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
177:							
Marmont-------------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
178:							
Marmont-------------	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
179:							
McCree--------------	80	Moderate		Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	0.50
180:							
McCree--------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
181:							
McCree--------------	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
182:							
McCree	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Palmich	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
183:							
McCree	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Palmont	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
184:							
McCree	55	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
185:							
Mippon	75	Slight		Slight		Moderately suited	
						Flooding	0.50
						Wetness	0.50
186:							
Mippon	75	Slight		Slight		Moderately suited	
						Flooding	0.50
						Sandiness	0.50
						Wetness	0.50
187:							
Mippon	75	Slight		Slight		Moderately suited	
						Flooding	0.50
						Sandiness	0.50
						Wetness	0.50
188:							
Morical	80	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
189:							
Morical	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
190:							
Morical	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
191:							
Morical	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Dragoon	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
192:							
Morical	65	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
Dragoon	20	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
193:							
Morical	65	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Dragoon	20	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
194:							
Morical	65	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Dragoon	20	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
195:							
Mountaineer	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
196:							
Mountaineer	60	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
197:							
Mountaineer	35	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Tillicum	30	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
198:							
Nahahum	80	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope Strength	 1.00 0.50
199:							
Nahahum	50	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope Strength	 1.00 0.50
Taneum	40	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope Strength	 1.00 0.50
200:							
Nard	75	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
201:							
Nard	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
202:							
Nard	40	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Blag	35	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
203:							
Nard	50	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Brisky	35	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
204:							
Nardine	85	Slight		Moderate Slope/erodibility	 0.50	Moderately suited Strength	 0.50
205:							
Nardmont	75	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope Strength	 0.50 0.50
206:							
Nardmont	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope Strength	 1.00 0.50
207:							
Natapoc	80	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
208:							
Natapoc	80	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
209:							
Natapoc	45	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Thow	30	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
210:							
Naxing	75	Moderate Slope/erodibility	 0.50	Moderate Slope/erodibility	 0.50	Moderately suited Slope	 0.50
211:							
Naxing	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
212:							
Newbell	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
213:							
Nimue	75	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
214:							
Nimue	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
215:							
Nimue	60	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
216:							
Nimue	40	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Nimue, dry	35	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
217:							
Nimue, dry	35	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Nimue	30	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
218:							
Oldbutte	85	Slight		Moderate Slope/erodibility	 0.50	Moderately suited Strength	 0.50
219:							
Oldbutte	80	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope Strength	 1.00 0.50
220:							
Palmich	90	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
221:							
Palmich	85	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
222:							
Palmich	85	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
223:							
Palmich	45	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
McCree	40	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
224:							
Palmich	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
McCree	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
225:							
Palmich	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
226:							
Palmont	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
227:							
Palmont	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
228:							
Palmont	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
229:							
Palmont	55	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
230:							
Ramparter	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
231:							
Ramparter	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
232:							
Ramparter	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
233:							
Ramparter	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
234:							
Ramparter	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
235:							
Ramparter	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
236:							
Ramparter-----------	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Wilma---------------	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
237:							
Reggad--------------	75	Very severe		Severe		Poorly suited	
		High organic content	1.00	High organic content	1.00	Slope	1.00
						Sandiness	1.00
		Slope/erodibility	0.95	Slope/erodibility	0.95		
238:							
Reggad--------------	75	Very severe		Severe		Poorly suited	
		High organic content	1.00	High organic content	1.00	Slope	1.00
						Sandiness	1.00
		Slope/erodibility	0.95	Slope/erodibility	0.95		
Serene--------------	35	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
239:							
Rock outcrop--------	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Blewett-------------	25	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
241:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Borland-------------	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
242:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Icicle--------------	15	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
243:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Icicle--------------	15	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
244:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Rubble land---------	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop--------	35	Not rated		Not rated		Not rated	
Rubble land---------	25	Not rated		Not rated		Not rated	
Serene--------------	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
246:							
Rubble land---------	65	Not rated		Not rated		Not rated	
Rock outcrop--------	20	Not rated		Not rated		Not rated	
247:							
Safety--------------	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
248:							
Safety--------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
249:							
Safety--------------	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
250:							
Safety--------------	70	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
251:							
Saska---------------	75	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
252:							
Saska---------------	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
253:							
Saska---------------	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
254:							
Saska---------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
255:							
Saska---------------	85	Moderate		Severe		Moderate	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
256:							
Saska	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
257:							
Saska	65	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
258:							
Saska	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
Saska, bouldery	35	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
259:							
Saska, south	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
Saska	35	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
260:							
Saska	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Saska, bouldery	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
261:							
Saska	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Saska, bouldery	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
262:							
Saska, south	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Saska	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
263:							
Saydab	80	Moderate		Moderate		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	0.50
264:							
Scotties	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
265:							
Serene	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
266:							
Serene	60	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
267:							
Serpen	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
268:							
Serpen	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
269:							
Shadypass	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
270:							
Shamel	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
271:							
Shamel	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
272:							
Shamel	60	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
273:							
Shaser	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Blewett	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
274:							
Shaser	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
Brisky	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
275:							
Shaser	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
275:							
Chapot	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
276:							
Skipeak	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
277:							
Skipeak	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Line	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
278:							
Soda	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
279:							
Soda	75	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
280:							
Soda	75	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
281:							
Soda	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
282:							
Soda	85	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
283:							
Soda	65	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
284:							
Soda	60	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
285:							
Soda	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Soda, cold	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
286:							
Soda	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
286:							
Soda, cold----------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
287:							
Soda----------------	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Soda, cold----------	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
288:							
Sodacreek-----------	75	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Wetness	0.50
289:							
Sodacreek-----------	70	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Wetness	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Wetness	0.50
Saska---------------	30	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
291:							
Spodic Vitrixerands	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Wetness	0.50
Saska---------------	35	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
292:							
Stemilt-------------	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
293:							
Stemilt-------------	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
294:							
Surgh---------------	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
295:							
Surgh---------------	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
296:							
Surgh	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
297:							
Surgh	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
Wedge	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
298:							
Swakane	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
299:							
Swakane	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
300:							
Swakane	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
301:							
Swakane	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	35	Not rated		Not rated		Not rated	
302:							
Switchback	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
303:							
Switchback	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
304:							
Switchback	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
305:							
Taneum	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
306:							
Thow	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
307:							
Thow	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
308:							
Thow	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
309:							
Thow	30	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Domkey	30	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
310:							
Thowson	85	Slight		Moderate Slope/erodibility	 0.50	Well suited	
311:							
Thowson	85	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
312:							
Thowson	85	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
313:							
Thowson	85	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
314:							
Thowson	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
315:							
Thowson	60	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
316:							
Thowson	60	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
317:							
Thowson	50	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
318:							
Thowson, stony	30	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Thowson	30	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
319:							
Tillicum	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
320:							
Tillicum	85	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
321:							
Tillicum	85	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
322:							
Tillmont	75	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
323:							
Tillmont	75	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
324:							
Tillmont	40	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Inkler	35	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
325:							
Tiptop	85	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope Sandiness	 1.00 0.50
326:							
Tiptop	40	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope Sandiness	 1.00 0.50
Naxing	35	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
327:							
Totem	85	Moderate Slope/erodibility	 0.50	Severe Slope/erodibility	 0.95	Moderately suited Slope	 0.50
328:							
Totem	80	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
329:							
Totem	80	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
330:							
Totem	60	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
Chiwaukum	20	Severe Slope/erodibility	 0.75	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00
331:							
Treen	80	Very severe Slope/erodibility	 0.95	Severe Slope/erodibility	 0.95	Poorly suited Slope	 1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
332:							
Treen	50	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Klapatche	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
333:							
Tronsen	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
334:							
Tronsen	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
335:							
Tyee	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
336:							
Tyee	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
337:							
Tyee	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
338:							
Tyee	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Bisping	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
339:							
Typic Cryaquands	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Strength	0.50
						Wetness	0.50
340:							
Vabbing	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Sandiness	0.50
341:							
Vabbing	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
342:							
Vabbing	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
Gilpar	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
343:							
Vabbing	70	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
344:							
Vabus	75	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
345:							
Vabus	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
346:							
Vabus	40	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
Chinkmin	35	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
347:							
Vabus	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Chinkmin	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
348:							
Varelum	85	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Strength	0.50
349:							
Varelum	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
350:							
Varelum	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
351:							
Varelum	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
352:							
Vitricryands	75	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
353:							
Vitricryands	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
354:							
Wagberg	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
355:							
Wagberg	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
356:							
Wagberg	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Wagberg, south	40	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
357:							
Wagberg	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Swakane	30	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
358:							
Wedge	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
359:							
Wedge	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
360:							
Wedge	80	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
361:							
Wedge	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
362:							
Wedge	60	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
Typic Cryaquands	30	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Strength	0.50
						Slope	0.50
						Wetness	0.50
363:							
Wedge	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Wedge, cold	30	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00

Table 8b.--Forest Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
364:							
Wedgemont	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
365:							
Wilma	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
366:							
Wilma	75	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
367:							
Yaxing	80	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
368:							
Yaxing	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
369:							
Yaxon	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
370:							
Yaxon	85	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Strength	0.50
371:							
Yaxon	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
372:							
Yaxon	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
373:							
Yaxon	85	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Strength	0.50
374:							
Zeb	75	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
W:							
Water	100	Not rated		Not rated		Not rated	

Table 8c.--Forest Management (Part III)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents---	75	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Strength	0.50
2:							
Almac---------------	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
3:							
Almac---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
4:							
Almac---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
5:							
Almac---------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Azwell--------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
6:							
Almac---------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Azwell--------------	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
7:							
Almac---------------	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop--------	25	Not rated		Not rated		Not rated	
8:							
Alnult--------------	70	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
Reggad--------------	15	Poorly suited		Unsuited		Poorly suited	
		Rock fragments	0.75	Slope	1.00	Strength	1.00
		Slope	0.50	Rock fragments	1.00	Slope	1.00
		Sandiness	0.50	Sandiness	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9:							
Altapeak------------	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
10:							
Altapeak------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
11:							
Altapeak------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
12:							
Altapeak------------	80	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50		
				Sandiness	0.50		
13:							
Altapeak------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Alnult--------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
14:							
Altapeak------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.50		
				Sandiness	0.50		
Alnult--------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
15:							
Altapeak------------	40	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50		
				Sandiness	0.50		
Alnult--------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
16:							
Anatone-------------	60	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00	Strength	0.50
		Slope	0.50	Restrictive layer	1.00		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
16:							
Blewett	30	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Sandiness	0.50	Restrictive layer	1.00	Sandiness	0.50
		Rock fragments	0.50	Rock fragments	0.75		
		Slope	0.50	Sandiness	0.50		
17:							
Anatone	70	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00	Strength	0.50
		Slope	0.50	Restrictive layer	1.00		
Rock outcrop	15	Not rated		Not rated		Not rated	
18:							
Andic Cryochrepts	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Strength	0.50
19:							
Andic Cryumbrepts	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
20:							
Andic Cryumbrepts	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
21:							
Andic Cryumbrepts	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Haplocryods	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	15	Not rated		Not rated		Not rated	
22:							
Andic Cryumbrepts	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
23:							
Andic Cryumbrepts	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
24:							
Andic Haplumbrepts	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24:							
Rock outcrop--------	30	Not rated		Not rated		Not rated	
25:							
Angle---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
26:							
Aquic Cryumprepts---	75	Well suited		Well suited		Poorly suited	
						Wetness	1.00
27:							
Ardening------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
28:							
Ardenmont-----------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
29:							
Ardenmont-----------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
30:							
Ardenmont-----------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
31:							
Ardenmont-----------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
Swakane-------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
32:							
Ardenvoir-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
33:							
Ardenvoir-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
34:							
Azwell--------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
35:							
Bagmont	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
36:							
Bigcreek	85	Well suited		Well suited		Well suited	
37:							
Billyridge	75	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
38:							
Billyridge	75	Well suited		Moderately suited		Well suited	
				Slope	0.50		
				Rock fragments	0.50		
39:							
Billyridge	75	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
40:							
Bisping	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
41:							
Bisping	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
42:							
Bisping	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
43:							
Bjork	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness	0.50	Stickiness	0.50	Strength	0.50
44:							
Bjork	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness	0.50	Stickiness	0.50	Strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
45:							
Blag	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Cle Elum	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
46:							
Blag	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
46:							
Rock outcrop--------	30	Not rated		Not rated		Not rated	
47:							
Blewett-------------	65	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Sandiness	0.50	Restrictive layer	1.00	Sandiness	0.50
		Rock fragments	0.50	Rock fragments	0.75		
		Slope	0.50	Sandiness	0.50		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
48:							
Borland-------------	85	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00	Strength	0.50
		Slope	0.50	Rock fragments	0.75		
49:							
Borland-------------	60	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00	Strength	0.50
		Slope	0.50	Rock fragments	0.75		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
50:							
Brief---------------	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
51:							
Brisky--------------	65	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00		
		Slope	0.50	Rock fragments	0.75		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
52:							
Burch---------------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Strength	0.50
53:							
Burnscreek----------	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
54:							
Burrant-------------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Strength	0.50
55:							
Burrant-------------	80	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
56:							
Cashmont------------	80	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
57:							
Cashmont------------	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
58:							
Chapot--------------	90	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	1.00	Strength	0.50
59:							
Chinkmin------------	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
60:							
Chinkmin------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
61:							
Chinkmin------------	40	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
Altapeak------------	30	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Slope	0.75		
				Rock fragments	0.50		
				Sandiness	0.50		
62:							
Chinkmin------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Altapeak------------	30	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50		
				Sandiness	0.50		
63:							
Chiwaukum-----------	90	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
64:							
Chiwaukum-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
65:							
Chiwaukum-----------	75	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
66:							
Chiwaukum-----------	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
67:							
Chiwaukum-----------	40	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
Chiwaukum, south----	35	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
68:							
Chiwaukum-----------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Chiwaukum, south----	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
69:							
Chiwawa-------------	85	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
70:							
Choralmont, till substratum---------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Choralmont----------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
71:							
Choralmont----------	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
72:							
Choralmont----------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
73:							
Choralmont----------	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
74:							
Choralmont----------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
75:							
Choralmont----------	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75:							
Limking	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
76:							
Chumstick	75	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
77:							
Chumstick	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
78:							
Chumstick	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
79:							
Cle Elum	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
80:							
Cle Elum	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
81:							
Coopmont	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
82:							
Coopmont	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
83:							
Cowiche	45	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Strength	0.50
Cowiche, very deep	40	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Strength	0.50
84:							
Cowiche	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
Cowiche, very deep	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
85:							
Cryomont------------	80	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Rock fragments	0.75		
		Rock fragments	0.50	Sandiness	0.50		
86:							
Cryomont------------	75	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Slope	0.75		
		Rock fragments	0.50	Rock fragments	0.75		
				Sandiness	0.50		
87:							
Cryomont------------	40	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Rock fragments	0.75		
		Rock fragments	0.50	Sandiness	0.50		
Cryomont, fan-------	35	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Slope	0.75		
		Rock fragments	0.50	Rock fragments	0.75		
				Sandiness	0.50		
88:							
Culving-------------	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Rock outcrop--------	20	Not rated		Not rated		Not rated	
89:							
Culvop--------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
90:							
Devore--------------	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
91:							
Dinkelman-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
92:							
Dinkelman-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
93:							
Dinkelman-----------	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop--------	25	Not rated		Not rated		Not rated	
94:							
Dinkels-------------	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
95:							
Dinkels	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
96:							
Dinkels	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
97:							
Domkey	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
98:							
Domkey	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
99:							
Domkey	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
McCree	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
100:							
Dragoon	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
101:							
Dragoon	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
102:							
Entiat	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
103:							
Entiat	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	25	Not rated		Not rated		Not rated	
104:							
Entic Haplumbrepts	90	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	1.00		
105:							
Esmeralda	75	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
106:							
Esmeralda	45	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106:							
Rock outcrop	35	Not rated		Not rated		Not rated	
107:							
Fears	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
108:							
Fears	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Devore	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
109:							
Fernow	80	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
110:							
Fernow	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
111:							
Fernow	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
Serene	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
112:							
Fluvaquents	80	Well suited		Well suited		Moderately suited	
						Strength	0.50
113:							
Georgecreek	80	Well suited		Moderately suited		Well suited	
				Slope	0.50		
114:							
Georgecreek	80	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
115:							
Georgecreek	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
116:							
Georgecreek	50	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Dragoon	30	Well suited		Moderately suited		Well suited	
				Slope	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
117:							
Georgecreek---------	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
Dragoon-------------	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
118:							
Gilpar--------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
119:							
Gilpar--------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Nimue---------------	30	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
120:							
Gilpar--------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Nimue---------------	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
121:							
Gilpar--------------	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	25	Not rated		Not rated		Not rated	
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
124:							
Goffpeak------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Fears---------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
125:							
Haplocryods, cold---	45	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
				Rock fragments	0.50	Strength	0.50

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
125:							
Haplocryods, stony--	30	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
				Rock fragments	0.50		
126:							
Haplocryods---------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Andic Cryochrepts---	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Strength	0.50
Rock outcrop--------	20	Not rated		Not rated		Not rated	
127:							
Haploxerolls--------	80	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
128:							
Haploxerolls--------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
129:							
Humicryods----------	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
				Rock fragments	0.50		
Andic Cryumbrepts---	35	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
130:							
Humicryods----------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Andic Cryochrepts---	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Strength	0.50
Rock outcrop--------	20	Not rated		Not rated		Not rated	
131:							
Humicryods----------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Andic Cryumbrepts---	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
132:							
Hyprairie-----------	85	Moderately suited		Unsuited		Moderately suited	
		Slope	0.50	Slope	1.00	Slope	0.50
						Strength	0.50
133:							
Hyprairie-----------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
134:							
Hyprairie-----------	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
Oldbutte------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
135:							
Icicle, south-------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Icicle--------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
136:							
Icicle--------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
137:							
Icicle--------------	80	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.75		
138:							
Icicle--------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
139:							
Icicle--------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
140:							
Icicle--------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
Chumstick-----------	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	25	Not rated		Not rated		Not rated	

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
141:							
Icicle	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
Chumstick	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	25	Not rated		Not rated		Not rated	
142:							
Inkler	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
143:							
Isella	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
Fernow	35	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
144:							
Isella	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
Fernow	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
145:							
Isella	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
Nimue	35	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Slope	0.75		
				Rock fragments	0.75		
146:							
Isella	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
Nimue	35	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
147:							
Kingmont	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
148:							
Kladnick	85	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
149:							
Kladnick------------	75	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
150:							
Kladnick------------	80	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
				Slope	0.50		
151:							
Klapatche-----------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50		
Altapeak------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
152:							
Kloochman-----------	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
153:							
Kloochman-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
154:							
Kloochman-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
155:							
Kloochman-----------	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Inkler--------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
156:							
Kloochman-----------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Inkler--------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
157:							
Kloochman-----------	70	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157:							
Rock outcrop	15	Not rated		Not rated		Not rated	
158:							
Limking	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
159:							
Limking	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Coopmont	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
160:							
Limking	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Coopmont	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
161:							
Limking	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Coopmont	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
162:							
Limking	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
163:							
Line	85	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Slope	0.75		
				Rock fragments	0.50		
				Sandiness	0.50		
164:							
Line	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
165:							
Line----------------	85	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Sandiness	0.50		
				Rock fragments	0.50		
166:							
Line----------------	40	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
Vabbing-------------	35	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Slope	0.75	Sandiness	0.50
				Rock fragments	0.50		
				Sandiness	0.50		
167:							
Loneridge-----------	85	Moderately suited		Poorly suited		Moderately suited	
		Stickiness	0.50	Slope	0.75	Strength	0.50
		Rock fragments	0.50	Rock fragments	0.75		
				Stickiness	0.50		
168:							
Loneridge-----------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
				Rock fragments	0.50		
169:							
Loneridge-----------	85	Moderately suited		Unsuited		Poorly suited	
		Stickiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75	Strength	0.50
		Rock fragments	0.50	Stickiness	0.50		
170:							
Macreeing-----------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
171:							
Macreeing-----------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
172:							
Macreeing-----------	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
173:							
Mansonia------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
174:							
Mansonia------------	50	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
174:							
Swakane-------------	20	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Slope	0.50
				Rock fragments	0.50		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
175:							
Mansonia------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Swakane-------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
176:							
Marmont-------------	85	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
				Slope	0.50		
177:							
Marmont-------------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
178:							
Marmont-------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
179:							
McCree--------------	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
180:							
McCree--------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
181:							
McCree--------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
182:							
McCree--------------	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Palmich-------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
183:							
McCree--------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
183:							
Palmont	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	15	Not rated		Not rated		Not rated	
184:							
McCree	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	25	Not rated		Not rated		Not rated	
185:							
Mippon	75	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
186:							
Mippon	75	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Rock fragments	0.50	Sandiness	0.50
				Sandiness	0.50		
187:							
Mippon	75	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
188:							
Morical	80	Well suited		Moderately suited		Well suited	
				Slope	0.50		
189:							
Morical	80	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
190:							
Morical	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
191:							
Morical	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Dragoon	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
192:							
Morical	65	Well suited		Poorly suited		Well suited	
				Slope	0.75		
Dragoon	20	Well suited		Poorly suited		Well suited	
				Slope	0.75		
193:							
Morical	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
193:							
Dragoon	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
194:							
Morical	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Dragoon	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
195:							
Mountaineer	75	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	1.00		
196:							
Mountaineer	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
Rock outcrop	20	Not rated		Not rated		Not rated	
197:							
Mountaineer	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
Tillicum	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
198:							
Nahahum	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
199:							
Nahahum	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
Taneum	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
200:							
Nard	75	Well suited		Poorly suited		Well suited	
				Slope	0.75		
201:							
Nard	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
202:							
Nard	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
202:							
Blag	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
203:							
Nard	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Brisky	35	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00		
		Slope	0.50	Rock fragments	0.75		
204:							
Nardine	85	Well suited		Well suited		Moderately suited	
						Strength	0.50
205:							
Nardmont	75	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
206:							
Nardmont	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
207:							
Natapoc	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
208:							
Natapoc	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
209:							
Natapoc	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Thow	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
210:							
Naxing	75	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Rock fragments	0.75		
				Slope	0.75		
211:							
Naxing	75	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
212:							
Newbell	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
213:							
Nimue	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
214:							
Nimue	75	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
215:							
Nimue	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Rock outcrop	20	Not rated		Not rated		Not rated	
216:							
Nimue	40	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
Nimue, dry	35	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
217:							
Nimue, dry	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Nimue	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75		
Rock outcrop	15	Not rated		Not rated		Not rated	
218:							
Oldbutte	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Strength	0.50
219:							
Oldbutte	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
220:							
Palmich	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
221:							
Palmich	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
222:							
Palmich	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
223:							
Palmich	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
McCree	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
224:							
Palmich	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
McCree	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
225:							
Palmich	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
226:							
Palmont	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
227:							
Palmont	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
228:							
Palmont	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
229:							
Palmont	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	30	Not rated		Not rated		Not rated	
230:							
Ramparter	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
231:							
Ramparter-----------	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
232:							
Ramparter-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
233:							
Ramparter-----------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
234:							
Ramparter-----------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
				Rock fragments	0.50		
235:							
Ramparter-----------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
236:							
Ramparter-----------	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Wilma---------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
237:							
Reggad--------------	75	Poorly suited		Unsuited		Poorly suited	
		Rock fragments	0.75	Slope	1.00	Strength	1.00
		Slope	0.50	Rock fragments	1.00	Slope	1.00
		Sandiness	0.50	Sandiness	0.50		
238:							
Reggad--------------	40	Poorly suited		Unsuited		Poorly suited	
		Rock fragments	0.75	Slope	1.00	Strength	1.00
		Slope	0.50	Rock fragments	1.00	Slope	1.00
		Sandiness	0.50	Sandiness	0.50		
Serene--------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
239:							
Rock outcrop--------	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
240:							
Blewett-------------	25	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Sandiness	0.50	Restrictive layer	1.00	Sandiness	0.50
		Rock fragments	0.50	Rock fragments	0.75		
		Slope	0.50	Sandiness	0.50		
241:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Borland-------------	30	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Slope	0.50	Restrictive layer	1.00	Strength	0.50
		Rock fragments	0.50	Rock fragments	0.75		
242:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Icicle--------------	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
243:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Icicle--------------	15	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
244:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Rubble land---------	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop--------	35	Not rated		Not rated		Not rated	
Rubble land---------	25	Not rated		Not rated		Not rated	
Serene--------------	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
246:							
Rubble land---------	65	Not rated		Not rated		Not rated	
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
247:							
Safety	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
248:							
Safety	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
249:							
Safety	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
250:							
Safety	70	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
251:							
Saska	75	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
252:							
Saska	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
253:							
Saska	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
254:							
Saska	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
255:							
Saska	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
256:							
Saska	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
257:							
Saska	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	20	Not rated		Not rated		Not rated	
258:							
Saska	40	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
258:							
Saska, bouldery-----	35	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
259:							
Saska, south--------	40	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
Saska---------------	35	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
260:							
Saska---------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Saska, bouldery-----	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
261:							
Saska---------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Saska, bouldery-----	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
262:							
Saska, south--------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Saska---------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
263:							
Saydab--------------	80	Moderately suited		Poorly suited		Well suited	
		Rock fragments	0.50	Slope	0.75		
				Rock fragments	0.75		
264:							
Scotties------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
265:							
Serene--------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
266:							
Serene	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	25	Not rated		Not rated		Not rated	
267:							
Serpen	85	Moderately suited		Poorly suited		Moderately suited	
		Stickiness	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.50		
				Stickiness	0.50		
268:							
Serpen	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness	0.50	Rock fragments	0.50		
				Stickiness	0.50		
269:							
Shadypass	80	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50	Sandiness	0.50
				Sandiness	0.50		
270:							
Shamel	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
271:							
Shamel	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
272:							
Shamel	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
273:							
Shaser	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Blewett	40	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Sandiness	0.50	Restrictive layer	1.00	Sandiness	0.50
		Rock fragments	0.50	Rock fragments	0.75		
		Slope	0.50	Sandiness	0.50		
274:							
Shaser	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Brisky	40	Unsuited		Unsuited		Poorly suited	
		Restrictive layer	1.00	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00		
		Slope	0.50	Rock fragments	0.75		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
275:							
Shaser	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
Chapot	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
276:							
Skipeak	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
277:							
Skipeak	40	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
Line	35	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Slope	0.75		
				Rock fragments	0.50		
				Sandiness	0.50		
278:							
Soda	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
279:							
Soda	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
280:							
Soda	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
281:							
Soda	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
282:							
Soda	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
283:							
Soda	65	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	15	Not rated		Not rated		Not rated	

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
284:							
Soda----------------	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
285:							
Soda----------------	40	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
Soda, cold----------	35	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
286:							
Soda----------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Soda, cold----------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
287:							
Soda----------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Soda, cold----------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
288:							
Sodacreek-----------	75	Moderately suited		Unsuited		Moderately suited	
		Slope	0.50	Slope	1.00	Slope	0.50
				Rock fragments	0.50	Wetness	0.50
289:							
Sodacreek-----------	70	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Wetness	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Well suited		Poorly suited		Well suited	
				Slope	0.75		
Saska---------------	30	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
291:							
Spodic Vitrixerands	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Saska---------------	35	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
292:							
Stemilt-------------	80	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
				Rock fragments	0.50		
293:							
Stemilt-------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
294:							
Surgh---------------	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
295:							
Surgh---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
296:							
Surgh---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
297:							
Surgh---------------	40	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
Wedge---------------	40	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
298:							
Swakane-------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
299:							
Swakane-------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
300:							
Swakane-------------	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	25	Not rated		Not rated		Not rated	

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
301:							
Swakane	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop	35	Not rated		Not rated		Not rated	
302:							
Switchback	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
303:							
Switchback	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
304:							
Switchback	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
305:							
Taneum	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Strength	0.50
306:							
Thow	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
307:							
Thow	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
308:							
Thow	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
309:							
Thow	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Domkey	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
310:							
Thowson	85	Well suited		Well suited		Well suited	
311:							
Thowson	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
312:							
Thowson	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
313:							
Thowson	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
314:							
Thowson	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
315:							
Thowson	60	Well suited		Poorly suited		Well suited	
				Slope	0.75		
Rock outcrop	15	Not rated		Not rated		Not rated	
316:							
Thowson	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
317:							
Thowson	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
318:							
Thowson, stony	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Thowson	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
319:							
Tillicum	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
320:							
Tillicum	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
321:							
Tillicum	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
322:							
Tillmont	75	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
323:							
Tillmont------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
324:							
Tillmont------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Inkler--------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
325:							
Tiptop--------------	85	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
326:							
Tiptop--------------	40	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
Naxing--------------	35	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75		
327:							
Totem---------------	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
328:							
Totem---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
329:							
Totem---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
330:							
Totem---------------	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
Chiwaukum-----------	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
331:							
Treen---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
332:							
Treen---------------	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
332:							
Klapatche-----------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50		
333:							
Tronsen-------------	80	Moderately suited		Poorly suited		Moderately suited	
		Stickiness	0.50	Slope	0.75	Strength	0.50
				Rock fragments	0.50		
				Stickiness	0.50		
334:							
Tronsen-------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness	0.50	Rock fragments	0.50	Strength	0.50
				Stickiness	0.50		
335:							
Tyee----------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
		Restrictive layer	0.50				
336:							
Tyee----------------	85	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
337:							
Tyee----------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
338:							
Tyee----------------	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Bisping-------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
339:							
Typic Cryaquands----	80	Well suited		Moderately suited		Moderately suited	
				Rock fragments	0.50	Strength	0.50
340:							
Vabbing-------------	80	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Slope	0.75	Sandiness	0.50
				Rock fragments	0.50		
				Sandiness	0.50		
341:							
Vabbing-------------	80	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50	Sandiness	0.50
				Sandiness	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
342:							
Vabbing-------------	40	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50	Sandiness	0.50
				Sandiness	0.50		
Gilpar--------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
343:							
Vabbing-------------	70	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.50	Sandiness	0.50
				Sandiness	0.50		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
344:							
Vabus---------------	75	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Slope	0.75		
				Rock fragments	0.50		
				Sandiness	0.50		
345:							
Vabus---------------	75	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50		
				Sandiness	0.50		
346:							
Vabus---------------	40	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Slope	0.75		
				Rock fragments	0.50		
				Sandiness	0.50		
Chinkmin------------	35	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
347:							
Vabus---------------	40	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50		
				Sandiness	0.50		
Chinkmin------------	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
348:							
Varelum-------------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Strength	0.50
349:							
Varelum-------------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Strength	0.50

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
350:							
Varelum-------------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
						Slope	0.50
351:							
Varelum-------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
352:							
Vitricryands--------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
353:							
Vitricryands--------	45	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
354:							
Wagberg-------------	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
355:							
Wagberg-------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
356:							
Wagberg-------------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Wagberg, south------	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
357:							
Wagberg-------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Swakane-------------	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
358:							
Wedge---------------	80	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
359:							
Wedge---------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
360:							
Wedge---------------	80	Moderately suited		Poorly suited		Well suited	
		Sandiness	0.50	Slope	0.75		
				Sandiness	0.50		
				Rock fragments	0.50		
361:							
Wedge---------------	80	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Sandiness	0.50		
				Rock fragments	0.50		
362:							
Wedge---------------	60	Moderately suited		Moderately suited		Well suited	
		Sandiness	0.50	Sandiness	0.50		
				Slope	0.50		
				Rock fragments	0.50		
Typic Cryaquands----	30	Well suited		Moderately suited		Moderately suited	
				Rock fragments	0.50	Strength	0.50
				Slope	0.50		
363:							
Wedge---------------	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Wedge, cold---------	30	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Sandiness	0.50		
				Rock fragments	0.50		
364:							
Wedgemont-----------	85	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.50	Sandiness	0.50
				Sandiness	0.50		
365:							
Wilma---------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
366:							
Wilma---------------	75	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
367:							
Yaxing--------------	80	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Strength	0.50

Table 8c.--Forest Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
368:							
Yaxing	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
369:							
Yaxon	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Strength	0.50
370:							
Yaxon	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Strength	0.50
						Slope	0.50
371:							
Yaxon	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
372:							
Yaxon	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
373:							
Yaxon	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Strength	0.50
374:							
Zeb	75	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
W:							
Water	100	Not rated		Not rated		Not rated	

Table 8d.--Forest Management (Part IV)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1:					
Aeric Fluvaquents	75	Well suited		Unsuited	
				Wetness	1.00
2:					
Almac	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
3:					
Almac	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
4:					
Almac	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
5:					
Almac	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Azwell	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
6:					
Almac	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Azwell	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Rock outcrop	15	Not rated		Not rated	
7:					
Almac	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	25	Not rated		Not rated	
8:					
Alnult	70	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Reggad	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
9:					
Altapeak	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
10:					
Altapeak	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
11:					
Altapeak	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
12:					
Altapeak	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
13:					
Altapeak	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Alnult	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
14:					
Altapeak	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Alnult	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
15:					
Altapeak	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Alnult	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
16:					
Anatone	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
Blewett	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
17:					
Anatone	70	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
Rock outcrop	15	Not rated		Not rated	
18:					
Andic Cryochrepts	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
19:					
Andic Cryumbrepts---	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
20:					
Andic Cryumbrepts---	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
21:					
Andic Cryumbrepts---	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Haplocryods---------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated	
22:					
Andic Cryumbrepts---	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Rock outcrop--------	20	Not rated		Not rated	
23:					
Andic Cryumbrepts---	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Rock outcrop--------	30	Not rated		Not rated	
24:					
Andic Haplumbrepts--	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Rock outcrop--------	30	Not rated		Not rated	
25:					
Angle---------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
26:					
Aquic Cryumbrepts---	75	Well suited		Unsuited	
				Wetness	1.00
27:					
Ardening------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
28:					
Ardenmont-----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
29:					
Ardenmont-----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
30:					
Ardenmont	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
31:					
Ardenmont	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Swakane	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
32:					
Ardenvoir	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
33:					
Ardenvoir	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
34:					
Azwell	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Rock outcrop	15	Not rated		Not rated	
35:					
Bagmont	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
36:					
Bigcreek	85	Well suited		Well suited	
37:					
Billyridge	75	Well suited		Well suited	
38:					
Billyridge	75	Well suited		Well suited	
39:					
Billyridge	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
40:					
Bisping	85	Well suited		Well suited	
41:					
Bisping	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
42:					
Bisping	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
43:					
Bjork	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
44:					
Bjork---------------	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
45:					
Blag----------------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Cle Elum------------	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated	
46:					
Blag----------------	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Rock outcrop--------	30	Not rated		Not rated	
47:					
Blewett-------------	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
Rock outcrop--------	20	Not rated		Not rated	
48:					
Borland-------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
49:					
Borland-------------	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
Rock outcrop--------	20	Not rated		Not rated	
50:					
Brief---------------	85	Well suited		Well suited	
51:					
Brisky--------------	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
Rock outcrop--------	20	Not rated		Not rated	
52:					
Burch---------------	85	Well suited		Well suited	

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
53:					
Burnscreek----------	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
54:					
Burrant-------------	85	Well suited		Well suited	
55:					
Burrant-------------	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
56:					
Cashmont------------	80	Well suited		Well suited	
57:					
Cashmont------------	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
58:					
Chapot--------------	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
59:					
Chinkmin------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
60:					
Chinkmin------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
61:					
Chinkmin------------	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Altapeak------------	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
62:					
Chinkmin------------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Altapeak------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
63:					
Chiwaukum-----------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
64:					
Chiwaukum-----------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
65:					
Chiwaukum-----------	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
66:					
Chiwaukum-----------	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
67:					
Chiwaukum-----------	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Chiwaukum, south----	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
68:					
Chiwaukum-----------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Chiwaukum, south----	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
69:					
Chiwawa-------------	85	Well suited		Well suited	
70:					
Choralmont, till substratum---------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Choralmont----------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
71:					
Choralmont----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
72:					
Choralmont----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
73:					
Choralmont----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
74:					
Choralmont----------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
75:					
Choralmont----------	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Limking-------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
76:					
Chumstick-----------	75	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
				Slope	0.50

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
77:					
Chumstick-----------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
78:					
Chumstick-----------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
79:					
Cle Elum------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
80:					
Cle Elum------------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
81:					
Coopmont------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
82:					
Coopmont------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
83:					
Cowiche-------------	45	Well suited		Well suited	
Cowiche, very deep--	40	Well suited		Well suited	
84:					
Cowiche-------------	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Cowiche, very deep--	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
85:					
Cryomont------------	80	Poorly suited		Well suited	
		Rock fragments	0.50		
86:					
Cryomont------------	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
87:					
Cryomont------------	40	Poorly suited		Well suited	
		Rock fragments	0.50		
Cryomont, fan-------	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
88:					
Culving	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Rock outcrop	20	Not rated		Not rated	
89:					
Culvop	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
90:					
Devore	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Rock outcrop	15	Not rated		Not rated	
91:					
Dinkelman	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
92:					
Dinkelman	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
93:					
Dinkelman	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	25	Not rated		Not rated	
94:					
Dinkels	85	Well suited		Well suited	
95:					
Dinkels	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
96:					
Dinkels	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
97:					
Domkey	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
98:					
Domkey	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
99:					
Domkey	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
McCree	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100:					
Dragoon-------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
101:					
Dragoon-------------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
102:					
Entiat--------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
103:					
Entiat--------------	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop--------	25	Not rated		Not rated	
104:					
Entic Haplumbrepts--	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
105:					
Esmeralda-----------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
106:					
Esmeralda-----------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Rock outcrop--------	35	Not rated		Not rated	
107:					
Fears---------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
108:					
Fears---------------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Devore--------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
109:					
Fernow--------------	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
110:					
Fernow--------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
111:					
Fernow--------------	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
111:					
Serene	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
112:					
Fluvaquents	80	Well suited		Well suited	
113:					
Georgecreek	80	Well suited		Well suited	
114:					
Georgecreek	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
115:					
Georgecreek	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
116:					
Georgecreek	50	Well suited		Well suited	
Dragoon	30	Well suited		Well suited	
117:					
Georgecreek	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Dragoon	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
118:					
Gilpar	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
119:					
Gilpar	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Nimue	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
120:					
Gilpar	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Nimue	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Rock outcrop	20	Not rated		Not rated	
121:					
Gilpar	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	25	Not rated		Not rated	

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
122:					
Glaciers, snowfields	90	Not rated		Not rated	
123:					
Goffpeak------------	85	Unsuited Slope	 1.00	Unsuited Slope	 1.00
124:					
Goffpeak------------	40	Unsuited Slope	 1.00	Unsuited Slope	 1.00
Fears---------------	35	Unsuited Slope	 1.00	Unsuited Slope	 1.00
125:					
Haplocryods, cold---	45	Poorly suited Slope	 0.50	Poorly suited Slope Restrictive layer	 0.50 0.50
Haplocryods, stony--	30	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
126:					
Haplocryods---------	40	Unsuited Slope	 1.00	Unsuited Slope	 1.00
Andic Cryochrepts---	20	Unsuited Slope Rock fragments	 1.00 0.50	Unsuited Slope	 1.00
Rock outcrop--------	20	Not rated		Not rated	
127:					
Haploxerolls--------	80	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
128:					
Haploxerolls--------	80	Unsuited Slope	 1.00	Unsuited Slope	 1.00
129:					
Humicryods----------	40	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
Andic Cryumbrepts---	35	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
130:					
Humicryods----------	40	Unsuited Slope	 1.00	Unsuited Slope	 1.00
Andic Cryochrepts---	20	Unsuited Slope Rock fragments	 1.00 0.50	Unsuited Slope	 1.00
Rock outcrop--------	20	Not rated		Not rated	

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
131:					
Humicryods	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Andic Cryumbrepts	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
132:					
Hyprairie	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
133:					
Hyprairie	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
134:					
Hyprairie	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Oldbutte	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
135:					
Icicle, south	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Icicle	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
136:					
Icicle	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
137:					
Icicle	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
138:					
Icicle	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
139:					
Icicle	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
140:					
Icicle	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
140:					
Chumstick-----------	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Rock outcrop--------	25	Not rated		Not rated	
141:					
Icicle--------------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Chumstick-----------	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Rock outcrop--------	25	Not rated		Not rated	
142:					
Inkler--------------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
143:					
Isella--------------	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Fernow--------------	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
144:					
Isella--------------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Fernow--------------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
145:					
Isella--------------	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Nimue---------------	35	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
146:					
Isella--------------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Nimue---------------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
147:					
Kingmont------------	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
148:					
Kladnick------------	85	Well suited		Well suited	

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
149:					
Kladnick	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
150:					
Kladnick	80	Poorly suited		Well suited	
		Rock fragments	0.50		
151:					
Klapatche	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Altapeak	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
152:					
Kloochman	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
153:					
Kloochman	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
154:					
Kloochman	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
155:					
Kloochman	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
Inkler	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
156:					
Kloochman	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Inkler	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
157:					
Kloochman	70	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
158:					
Limking	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
159:					
Limking	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Coopmont	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
160:					
Limking	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Coopmont	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
161:					
Limking	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Coopmont	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	
162:					
Limking	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	
163:					
Line	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
164:					
Line	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
165:					
Line	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
166:					
Line	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Vabbing	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
167:					
Loneridge	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
168:					
Loneridge	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
169:					
Loneridge-----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
170:					
Macreeing-----------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
171:					
Macreeing-----------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
172:					
Macreeing-----------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Rock outcrop--------	30	Not rated		Not rated	
173:					
Mansonia------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
174:					
Mansonia------------	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Swakane-------------	20	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
				Slope	0.50
Rock outcrop--------	20	Not rated		Not rated	
175:					
Mansonia------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Swakane-------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Rock outcrop--------	30	Not rated		Not rated	
176:					
Marmont-------------	85	Well suited		Well suited	
177:					
Marmont-------------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
178:					
Marmont-------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
179:					
McCree	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
180:					
McCree	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
181:					
McCree	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
182:					
McCree	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Palmich	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
183:					
McCree	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Palmont	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
184:					
McCree	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	25	Not rated		Not rated	
185:					
Mippon	75	Well suited		Well suited	
186:					
Mippon	75	Well suited		Well suited	
187:					
Mippon	75	Poorly suited		Well suited	
		Rock fragments	0.50		
188:					
Morical	80	Well suited		Well suited	
189:					
Morical	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
190:					
Morical	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
191:					
Morical	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
191:					
Dragoon	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
192:					
Morical	65	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Dragoon	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
193:					
Morical	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Dragoon	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
194:					
Morical	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Dragoon	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
195:					
Mountaineer	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
196:					
Mountaineer	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Rock outcrop	20	Not rated		Not rated	
197:					
Mountaineer	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Tillicum	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
198:					
Nahahum	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
199:					
Nahahum	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Taneum	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
200:					
Nard----------------	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
201:					
Nard----------------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
202:					
Nard----------------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Blag----------------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
203:					
Nard----------------	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Brisky--------------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
204:					
Nardine-------------	85	Well suited		Well suited	
205:					
Nardmont------------	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
206:					
Nardmont------------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
207:					
Natapoc-------------	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
208:					
Natapoc-------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
209:					
Natapoc-------------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Thow----------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
210:					
Naxing--------------	75	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
211:					
Naxing	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
212:					
Newbell	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
213:					
Nimue	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
214:					
Nimue	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
215:					
Nimue	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Rock outcrop	20	Not rated		Not rated	
216:					
Nimue	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Nimue, dry	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
217:					
Nimue, dry	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Nimue	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Rock outcrop	15	Not rated		Not rated	
218:					
Oldbutte	85	Well suited		Well suited	
219:					
Oldbutte	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
220:					
Palmich	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
221:					
Palmich-------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
222:					
Palmich-------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
223:					
Palmich-------------	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
McCree--------------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
224:					
Palmich-------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
McCree--------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop--------	20	Not rated		Not rated	
225:					
Palmich-------------	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop--------	20	Not rated		Not rated	
226:					
Palmont-------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
227:					
Palmont-------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
228:					
Palmont-------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
229:					
Palmont-------------	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop--------	30	Not rated		Not rated	
230:					
Ramparter-----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
231:					
Ramparter-----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
232:					
Ramparter-----------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
233:					
Ramparter-----------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
234:					
Ramparter-----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
235:					
Ramparter-----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
236:					
Ramparter-----------	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Wilma---------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
237:					
Reggad--------------	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
238:					
Reggad--------------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Serene--------------	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
239:					
Rock outcrop--------	90	Not rated		Not rated	
240:					
Rock outcrop--------	50	Not rated		Not rated	
Blewett-------------	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
241:					
Rock outcrop--------	50	Not rated		Not rated	
Borland-------------	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
242:					
Rock outcrop--------	40	Not rated		Not rated	
Chumstick-----------	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
242:					
Icicle	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
243:					
Rock outcrop	40	Not rated		Not rated	
Chumstick	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Icicle	15	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
244:					
Rock outcrop	50	Not rated		Not rated	
Rubble land	20	Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated	
245:					
Rock outcrop	35	Not rated		Not rated	
Rubble land	25	Not rated		Not rated	
Serene	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
246:					
Rubble land	65	Not rated		Not rated	
Rock outcrop	20	Not rated		Not rated	
247:					
Safety	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
248:					
Safety	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
249:					
Safety	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
250:					
Safety	70	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
251:					
Saska	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
252:					
Saska	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
253:					
Saska	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
254:					
Saska	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
255:					
Saska	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
256:					
Saska	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
257:					
Saska	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	
258:					
Saska	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Saska, bouldery	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
259:					
Saska, south	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Saska	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
260:					
Saska	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Saska, bouldery	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
261:					
Saska	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Saska, bouldery	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
262:					
Saska, south	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
262:					
Saska	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
263:					
Saydab	80	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
264:					
Scotties	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
265:					
Serene	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
266:					
Serene	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	25	Not rated		Not rated	
267:					
Serpen	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
268:					
Serpen	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
269:					
Shadypass	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
270:					
Shamel	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
271:					
Shamel	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
272:					
Shamel	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	
273:					
Shaser	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Blewett	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
274:					
Shaser	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Brisky	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Restrictive layer	1.00	Restrictive layer	1.00
		Rock fragments	0.50		
275:					
Shaser	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Chapot	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
276:					
Skipeak	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
277:					
Skipeak	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Line	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
278:					
Soda	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
279:					
Soda	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
280:					
Soda	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
281:					
Soda	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
282:					
Soda	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
283:					
Soda	65	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
284:					
Soda	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
285:					
Soda	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Soda, cold	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
286:					
Soda	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Soda, cold	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
287:					
Soda	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Soda, cold	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
288:					
Sodacreek	75	Poorly suited		Unsuited	
		Slope	0.50	Wetness	1.00
				Slope	0.50
289:					
Sodacreek	70	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Wetness	1.00
Rock outcrop	15	Not rated		Not rated	
290:					
Spodic Vitrixerands	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Saska	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
291:					
Spodic Vitrixerands	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Saska	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
292:					
Stemilt	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
293:					
Stemilt	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
294:					
Surgh	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
295:					
Surgh	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
296:					
Surgh	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
297:					
Surgh	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Wedge	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
298:					
Swakane	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
299:					
Swakane	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
300:					
Swakane	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Rock outcrop	25	Not rated		Not rated	
301:					
Swakane	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Rock outcrop	35	Not rated		Not rated	
302:					
Switchback	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
303:					
Switchback	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
304:					
Switchback	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
305:					
Taneum	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
306:					
Thow	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
307:					
Thow	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
308:					
Thow	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
309:					
Thow	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Domkey	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	
310:					
Thowson	85	Well suited		Well suited	
311:					
Thowson	85	Well suited		Well suited	
312:					
Thowson	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
313:					
Thowson	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
314:					
Thowson	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
315:					
Thowson	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Rock outcrop	15	Not rated		Not rated	
316:					
Thowson	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
317:					
Thowson	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated	

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
318:					
Thowson, stony	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Thowson	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
319:					
Tillicum	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
320:					
Tillicum	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
321:					
Tillicum	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
322:					
Tillmont	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
323:					
Tillmont	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
324:					
Tillmont	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Inkler	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
325:					
Tiptop	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
326:					
Tiptop	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
Naxing	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
327:					
Totem	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
328:					
Totem	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
329:					
Totem	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
330:					
Totem	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Chiwaukum	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
331:					
Treen	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
332:					
Treen	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Klapatche	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
333:					
Tronsen	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
334:					
Tronsen	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
335:					
Tyee	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50		
336:					
Tyee	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
337:					
Tyee	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
338:					
Tyee	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Bisping	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
339:					
Typic Cryaquands	80	Well suited		Well suited	
340:					
Vabbing	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
341:					
Vabbing	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
342:					
Vabbing	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Gilpar	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
343:					
Vabbing	70	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	
344:					
Vabus	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
345:					
Vabus	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
346:					
Vabus	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Chinkmin	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
347:					
Vabus	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Chinkmin	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
348:					
Varelum	85	Well suited		Well suited	
349:					
Varelum	85	Well suited		Well suited	
350:					
Varelum	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
351:					
Varelum	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
352:					
Vitricryands	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
353:					
Vitricryands	45	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated	
354:					
Wagberg	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
355:					
Wagberg	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
356:					
Wagberg	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Wagberg, south	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
357:					
Wagberg	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Swakane	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	1.00
Rock outcrop	20	Not rated		Not rated	
358:					
Wedge	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
359:					
Wedge	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
360:					
Wedge	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
361:					
Wedge	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
362:					
Wedge	60	Well suited		Well suited	
Typic Cryaquands	30	Well suited		Well suited	
363:					
Wedge	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Wedge, cold	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00

Table 8d.--Forest Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
364:					
Wedgemont	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
365:					
Wilma	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
366:					
Wilma	75	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated	
367:					
Yaxing	80	Well suited		Well suited	
368:					
Yaxing	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
369:					
Yaxon	85	Well suited		Well suited	
370:					
Yaxon	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
371:					
Yaxon	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
372:					
Yaxon	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
373:					
Yaxon	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
374:					
Zeb	75	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
W:					
Water	100	Not rated		Not rated	

Table 8e.--Forest Management (Part V)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1:					
Aeric Fluvaquents	75	Low		Moderate	
		Texture/coarse fragments	0.10	Wetness	0.50
2:					
Almac	85	Low		Low	
3:					
Almac	80	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
4:					
Almac	80	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
5:					
Almac	40	Low		Low	
Azwell	30	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
6:					
Almac	35	Low		Low	
Azwell	25	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop	15	Not rated		Not rated	
7:					
Almac	55	Low		Low	
Rock outcrop	25	Not rated		Not rated	
8:					
Alnult	70	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
Reggad	15	Low		High	
				Soil reaction	1.00

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
9:					
Altapeak------------	85	Low Texture/coarse fragments	 0.10	Low	
10:					
Altapeak------------	75	Low Texture/coarse fragments	 0.10	Low	
11:					
Altapeak------------	75	Low Texture/coarse fragments	 0.10	Low	
12:					
Altapeak------------	80	Low		Low	
13:					
Altapeak------------	40	Low Texture/coarse fragments	 0.10	Low	
Alnult--------------	30	Moderate Texture/slope/ coarse fragments	 0.50	Low	
14:					
Altapeak------------	40	Low		Low	
Alnult--------------	30	Moderate Texture/slope/ coarse fragments	 0.50	Low	
15:					
Altapeak------------	40	Low		Low	
Alnult--------------	30	Moderate Texture/slope/ coarse fragments	 0.50	Low	
16:					
Anatone-------------	60	Moderate Texture/slope/ surface depth/ coarse fragments	 0.50	Low	
Blewett-------------	30	Low		Low	
17:					
Anatone-------------	70	Moderate Texture/slope/ surface depth/ coarse fragments	 0.50	Low	
Rock outcrop--------	15	Not rated		Not rated	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
18:					
Andic Cryochrepts---	75	Low		Low	
19:					
Andic Cryumbrepts---	80	Low		Low	
20:					
Andic Cryumbrepts---	75	Low		Low	
		Texture/coarse fragments	0.10		
21:					
Andic Cryumbrepts---	30	Low		Low	
		Texture/coarse fragments	0.10		
Haplocryods---------	30	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop--------	15	Not rated		Not rated	
22:					
Andic Cryumbrepts---	55	Low		Low	
		Texture/coarse fragments	0.10		
Rock outcrop--------	20	Not rated		Not rated	
23:					
Andic Cryumbrepts---	50	Low		Low	
		Texture/coarse fragments	0.10		
Rock outcrop--------	30	Not rated		Not rated	
24:					
Andic Haplumbrepts--	45	Low		Low	
Rock outcrop--------	30	Not rated		Not rated	
25:					
Angle---------------	80	High		Low	
		Texture/slope/ surface depth	1.00		
26:					
Aquic Cryumbrepts---	75	Low		High	
				Wetness	1.00
27:					
Ardening------------	80	Low		Low	
28:					
Ardenmont-----------	85	High		Low	
		Texture/surface depth/coarse fragments	1.00		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
29:					
Ardenmont-----------	85	High		Low	
		Texture/slope/ surface depth	1.00		
30:					
Ardenmont-----------	85	High		Low	
		Texture/slope/ surface depth	1.00		
31:					
Ardenmont-----------	40	High		Low	
		Texture/slope/ surface depth	1.00		
Swakane-------------	35	Low		Low	
32:					
Ardenvoir-----------	80	Low		Low	
33:					
Ardenvoir-----------	80	Low		Low	
34:					
Azwell--------------	75	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop--------	15	Not rated		Not rated	
35:					
Bagmont-------------	80	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
36:					
Bigcreek------------	85	Moderate		Low	
		Texture/coarse fragments	0.50		
37:					
Billyridge----------	75	Low		Low	
		Texture/coarse fragments	0.10		
38:					
Billyridge----------	75	Low		Low	
		Texture/coarse fragments	0.10		
39:					
Billyridge----------	75	Low		Low	
		Texture/coarse fragments	0.10		
40:					
Bisping-------------	85	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
41:					
Bisping-------------	85	Low		Low	
42:					
Bisping-------------	80	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
43:					
Bjork---------------	85	Low		Low	
		Texture/coarse fragments	0.10		
44:					
Bjork---------------	55	Low		Low	
Rock outcrop--------	30	Not rated		Not rated	
45:					
Blag----------------	45	Low		Low	
Cle Elum------------	25	Low		Low	
		Texture/coarse fragments	0.10		
Rock outcrop--------	15	Not rated		Not rated	
46:					
Blag----------------	50	Low		Low	
Rock outcrop--------	30	Not rated		Not rated	
47:					
Blewett-------------	65	Low		Low	
Rock outcrop--------	20	Not rated		Not rated	
48:					
Borland-------------	85	Low		Low	
49:					
Borland-------------	60	Low		Low	
Rock outcrop--------	20	Not rated		Not rated	
50:					
Brief---------------	85	Low		Low	
		Texture/coarse fragments	0.10		
51:					
Brisky--------------	65	Low		Low	
Rock outcrop--------	20	Not rated		Not rated	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
52:					
Burch	85	Moderate		Low	
		Texture/coarse fragments	0.50		
53:					
Burnscreek	80	Low		Low	
54:					
Burrant	85	Low		Low	
		Texture/coarse fragments	0.10		
55:					
Burrant	80	Low		Low	
		Texture/coarse fragments	0.10		
56:					
Cashmont	80	Moderate		Low	
		Texture/coarse fragments	0.50		
57:					
Cashmont	80	Moderate		Low	
		Texture/coarse fragments	0.50		
58:					
Chapot	90	High		Low	
		Texture/slope/ coarse fragments	1.00		
59:					
Chinkmin	85	Low		Low	
60:					
Chinkmin	85	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
61:					
Chinkmin	40	Low		Low	
Altapeak	30	Low		Low	
		Texture/coarse fragments	0.10		
62:					
Chinkmin	40	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Altapeak	30	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
63:					
Chiwaukum-----------	90	Low		Low	
64:					
Chiwaukum-----------	80	Low		Low	
65:					
Chiwaukum-----------	75	Low		Low	
		Texture/coarse fragments	0.10		
66:					
Chiwaukum-----------	80	Low		Low	
67:					
Chiwaukum-----------	40	Low		Low	
Chiwaukum, south----	35	Low		Low	
		Texture/coarse fragments	0.10		
68:					
Chiwaukum-----------	40	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Chiwaukum, south----	35	Low		Low	
		Texture/coarse fragments	0.10		
69:					
Chiwawa-------------	85	Low		Low	
70:					
Choralmont, till substratum---------	40	Moderate		Low	
		Texture/coarse fragments	0.50		
Choralmont----------	35	Moderate		Low	
		Texture/coarse fragments	0.50		
71:					
Choralmont----------	85	Moderate		Low	
		Texture/coarse fragments	0.50		
72:					
Choralmont----------	85	Moderate		Low	
		Texture/coarse fragments	0.50		
73:					
Choralmont----------	85	Moderate		Low	
		Texture/coarse fragments	0.50		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
74:					
Choralmont	75	Moderate		Low	
		Texture/coarse fragments	0.50		
75:					
Choralmont	50	Moderate		Low	
		Texture/coarse fragments	0.50		
Limking	30	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
76:					
Chumstick	75	Low		Low	
77:					
Chumstick	75	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
78:					
Chumstick	80	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
79:					
Cle Elum	85	Low		Low	
		Texture/coarse fragments	0.10		
80:					
Cle Elum	75	Low		Low	
		Texture/coarse fragments	0.10		
81:					
Coopmont	85	Moderate		Low	
		Texture/coarse fragments	0.50		
82:					
Coopmont	80	Low		Low	
83:					
Cowiche	45	Low		Low	
		Texture/coarse fragments	0.10		
Cowiche, very deep	40	Low		Low	
		Texture/coarse fragments	0.10		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
84:					
Cowiche	50	Low		Low	
		Texture/coarse fragments	0.10		
Cowiche, very deep	30	Low		Low	
		Texture/coarse fragments	0.10		
85:					
Cryomont	80	Moderate		Low	
		Texture/coarse fragments	0.50		
86:					
Cryomont	75	Low		Low	
87:					
Cryomont	40	Moderate		Low	
		Texture/coarse fragments	0.50		
Cryomont, fan	35	Low		Low	
88:					
Culving	65	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
Rock outcrop	20	Not rated		Not rated	
89:					
Culvop	85	Low		Low	
90:					
Devore	60	Low		Low	
Rock outcrop	15	Not rated		Not rated	
91:					
Dinkelman	80	Moderate		Low	
		Texture/coarse fragments	0.50		
92:					
Dinkelman	80	Moderate		Low	
		Texture/coarse fragments	0.50		
93:					
Dinkelman	55	Moderate		Low	
		Texture/coarse fragments	0.50		
Rock outcrop	25	Not rated		Not rated	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
94:					
Dinkels	85	Low		Low	
		Texture/coarse fragments	0.10		
95:					
Dinkels	90	Low		Low	
		Texture/coarse fragments	0.10		
96:					
Dinkels	85	Low		Low	
		Texture/coarse fragments	0.10		
97:					
Domkey	80	Low		Low	
98:					
Domkey	85	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
99:					
Domkey	40	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
McCree	35	Low		Low	
100:					
Dragoon	80	Low		Low	
101:					
Dragoon	75	Low		Low	
		Texture/coarse fragments	0.10		
102:					
Entiat	85	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
103:					
Entiat	60	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
Rock outcrop	25	Not rated		Not rated	
104:					
Entic Haplumbrepts	90	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
105:					
Esmeralda-----------	75	Low		Low	
106:					
Esmeralda-----------	45	Low		Low	
Rock outcrop--------	35	Not rated		Not rated	
107:					
Fears---------------	80	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
108:					
Fears---------------	40	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Devore--------------	30	Low		Low	
109:					
Fernow--------------	80	Low		Low	
		Texture/coarse fragments	0.10		
110:					
Fernow--------------	80	Low		Low	
111:					
Fernow--------------	50	Low		Low	
Serene--------------	25	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
112:					
Fluvaquents---------	80	Low		High	
		Texture/coarse fragments	0.10	Wetness	1.00
113:					
Georgecreek---------	80	Low		Low	
		Texture/coarse fragments	0.10		
114:					
Georgecreek---------	80	Low		Low	
		Texture/coarse fragments	0.10		
115:					
Georgecreek---------	80	Low		Low	
		Texture/coarse fragments	0.10		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
116:					
Georgecreek---------	50	Low		Low	
		Texture/coarse fragments	0.10		
Dragoon-------------	30	Low		Low	
		Texture/coarse fragments	0.10		
117:					
Georgecreek---------	40	Low		Low	
		Texture/coarse fragments	0.10		
Dragoon-------------	40	Low		Low	
		Texture/coarse fragments	0.10		
118:					
Gilpar--------------	80	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
119:					
Gilpar--------------	40	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
Nimue---------------	30	Low		Low	
120:					
Gilpar--------------	35	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
Nimue---------------	25	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop--------	20	Not rated		Not rated	
121:					
Gilpar--------------	60	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
Rock outcrop--------	25	Not rated		Not rated	
122:					
Glaciers, snowfields	90	Not rated		Not rated	
123:					
Goffpeak------------	85	Low		Low	
		Texture/coarse fragments	0.10		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
124:					
Goffpeak	40	Low		Low	
		Texture/coarse fragments	0.10		
Fears	35	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
125:					
Haplocryods, cold	45	Low		Low	
Haplocryods, stony	30	Low		Low	
126:					
Haplocryods	40	Low		Low	
Andic Cryochrepts	20	Low		Low	
Rock outcrop	20	Not rated		Not rated	
127:					
Haploxerolls	80	Low		Low	
128:					
Haploxerolls	80	Low		Low	
129:					
Humicryods	40	Low		Low	
Andic Cryumbrepts	35	Low		Low	
130:					
Humicryods	40	High		Low	
		Texture/slope/ surface depth	1.00		
Andic Cryochrepts	20	Low		Low	
Rock outcrop	20	Not rated		Not rated	
131:					
Humicryods	40	High		Low	
		Texture/slope/ surface depth	1.00		
Andic Cryumbrepts	20	Low		Low	
		Texture/coarse fragments	0.10		
Rock outcrop	15	Not rated		Not rated	
132:					
Hyprairie	85	Low		Low	
		Texture/coarse fragments	0.10		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
133:					
Hyprairie-----------	85	Low		Low	
		Texture/coarse fragments	0.10		
134:					
Hyprairie-----------	45	Low		Low	
		Texture/coarse fragments	0.10		
Oldbutte------------	40	Low		Low	
		Texture/coarse fragments	0.10		
135:					
Icicle, south-------	40	Low		Low	
Icicle--------------	40	Low		Low	
136:					
Icicle--------------	80	Low		Low	
137:					
Icicle--------------	80	Low		Low	
		Texture/coarse fragments	0.10		
138:					
Icicle--------------	75	Low		Low	
139:					
Icicle--------------	85	Low		Low	
140:					
Icicle--------------	30	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
Chumstick-----------	25	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop--------	25	Not rated		Not rated	
141:					
Icicle--------------	35	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
Chumstick-----------	25	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop--------	25	Not rated		Not rated	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
142:					
Inkler	75	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
143:					
Isella	40	Low		Low	
		Texture/coarse fragments	0.10		
Fernow	35	Low		Low	
		Texture/coarse fragments	0.10		
144:					
Isella	40	Low		Low	
Fernow	35	Low		Low	
145:					
Isella	40	Low		Low	
Nimue	35	Low		Low	
		Texture/coarse fragments	0.10		
146:					
Isella	40	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Nimue	35	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
147:					
Kingmont	90	Low		Low	
		Texture/coarse fragments	0.10		
148:					
Kladnick	85	Low		Low	
		Texture/coarse fragments	0.10		
149:					
Kladnick	75	Low		Low	
		Texture/coarse fragments	0.10		
150:					
Kladnick	80	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
151:					
Klapatche-----------	40	High Texture/slope/ surface depth	 1.00	Low	
Altapeak------------	35	Low Texture/coarse fragments	 0.10	Low	
152:					
Kloochman-----------	80	Low		Low	
153:					
Kloochman-----------	80	Moderate Texture/slope/ surface depth/ coarse fragments	 0.50	Low	
154:					
Kloochman-----------	80	Moderate Texture/slope/ surface depth/ coarse fragments	 0.50	Low	
155:					
Kloochman-----------	45	Moderate Texture/slope/ surface depth/ coarse fragments	 0.50	Low	
Inkler--------------	35	High Texture/slope/ surface depth/ coarse fragments	 1.00	Low	
156:					
Kloochman-----------	35	Moderate Texture/slope/ surface depth/ coarse fragments	 0.50	Low	
Inkler--------------	30	High Texture/slope/ surface depth/ coarse fragments	 1.00	Low	
Rock outcrop--------	15	Not rated		Not rated	
157:					
Kloochman-----------	70	Moderate Texture/slope/ surface depth/ coarse fragments	 0.50	Low	
Rock outcrop--------	15	Not rated		Not rated	
158:					
Limking-------------	80	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
159:					
Limking	40	Low		Low	
Coopmont	35	Low		Low	
160:					
Limking	40	Low		Low	
Coopmont	35	Low		Low	
161:					
Limking	30	Low		Low	
Coopmont	25	Low		Low	
Rock outcrop	20	Not rated		Not rated	
162:					
Limking	55	Low		Low	
Rock outcrop	20	Not rated		Not rated	
163:					
Line	85	Low		Low	
164:					
Line	85	Moderate Texture/coarse fragments	 0.50	Low	
165:					
Line	85	Low		Low	
166:					
Line	40	Moderate Texture/coarse fragments	 0.50	Low	
Vabbing	35	Low		Low	
167:					
Loneridge	85	Low Texture/coarse fragments	 0.10	Low	
168:					
Loneridge	85	Low		Low	
169:					
Loneridge	85	Low		Low	
170:					
Macreeing	75	Low		Low	
171:					
Macreeing	75	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
172:					
Macreeing-----------	45	Low		Low	
Rock outcrop--------	30	Not rated		Not rated	
173:					
Mansonia------------	85	Moderate		Low	
		Texture/coarse fragments	0.50		
174:					
Mansonia------------	50	Moderate		Low	
		Texture/coarse fragments	0.50		
Swakane-------------	20	Moderate		Low	
		Texture/surface depth/coarse fragments	0.50		
Rock outcrop--------	20	Not rated		Not rated	
175:					
Mansonia------------	30	Moderate		Low	
		Texture/coarse fragments	0.50		
Swakane-------------	30	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
Rock outcrop--------	30	Not rated		Not rated	
176:					
Marmont-------------	85	Moderate		Low	
		Texture/coarse fragments	0.50		
177:					
Marmont-------------	85	Moderate		Low	
		Texture/coarse fragments	0.50		
178:					
Marmont-------------	85	Moderate		Low	
		Texture/coarse fragments	0.50		
179:					
McCree--------------	80	Moderate		Low	
		Texture/coarse fragments	0.50		
180:					
McCree--------------	80	Low		Low	
181:					
McCree--------------	80	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
182:					
McCree	50	Low		Low	
Palmich	30	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
183:					
McCree	30	Low		Low	
Palmont	30	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
Rock outcrop	15	Not rated		Not rated	
184:					
McCree	55	Low		Low	
Rock outcrop	25	Not rated		Not rated	
185:					
Mippon	75	Moderate		Low	
		Texture/coarse fragments	0.50		
186:					
Mippon	75	High		Low	
		Texture/coarse fragments	1.00		
187:					
Mippon	75	Moderate		Low	
		Texture/coarse fragments	0.50		
188:					
Morical	80	Low		Low	
		Texture/coarse fragments	0.10		
189:					
Morical	80	Low		Low	
		Texture/coarse fragments	0.10		
190:					
Morical	80	Low		Low	
		Texture/coarse fragments	0.10		
191:					
Morical	40	Low		Low	
		Texture/coarse fragments	0.10		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
191:					
Dragoon	40	Low		Low	
		Texture/coarse fragments	0.10		
192:					
Morical	65	Low		Low	
		Texture/coarse fragments	0.10		
Dragoon	20	Low		Low	
		Texture/coarse fragments	0.10		
193:					
Morical	65	Low		Low	
		Texture/coarse fragments	0.10		
Dragoon	20	Low		Low	
194:					
Morical	65	Low		Low	
		Texture/coarse fragments	0.10		
Dragoon	20	Low		Low	
195:					
Mountaineer	75	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
196:					
Mountaineer	60	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop	20	Not rated		Not rated	
197:					
Mountaineer	35	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Tillicum	30	Low		Low	
Rock outcrop	15	Not rated		Not rated	
198:					
Nahahum	80	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
199:					
Nahahum	50	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
Taneum	40	Low		Low	
		Texture/coarse fragments	0.10		
200:					
Nard	75	Moderate		Low	
		Texture/coarse fragments	0.50		
201:					
Nard	75	Low		Low	
202:					
Nard	40	Low		Low	
Blag	35	Low		Low	
203:					
Nard	50	Low		Low	
Brisky	35	Low		Low	
204:					
Nardine	85	Low		Moderate	
				Wetness	0.50
205:					
Nardmont	75	Moderate		Low	
		Texture/coarse fragments	0.50		
206:					
Nardmont	75	Moderate		Low	
		Texture/coarse fragments	0.50		
207:					
Natapoc	80	Moderate		Low	
		Texture/coarse fragments	0.50		
208:					
Natapoc	80	Low		Low	
209:					
Natapoc	45	Low		Low	
Thow	30	Low		Low	
210:					
Naxing	75	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
211:					
Naxing	75	Low		Low	
212:					
Newbell	75	Low		Low	
		Texture/coarse fragments	0.10		
213:					
Nimue	75	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
214:					
Nimue	75	Low		Low	
215:					
Nimue	60	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop	20	Not rated		Not rated	
216:					
Nimue	40	Low		Low	
Nimue, dry	35	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
217:					
Nimue, dry	35	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Nimue	30	Low		Low	
Rock outcrop	15	Not rated		Not rated	
218:					
Oldbutte	85	Low		Low	
		Texture/coarse fragments	0.10		
219:					
Oldbutte	80	Low		Low	
		Texture/coarse fragments	0.10		
220:					
Palmich	90	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
221:					
Palmich	85	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
222:					
Palmich	85	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
223:					
Palmich	45	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
McCree	40	Low		Low	
224:					
Palmich	30	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
McCree	30	Low		Low	
Rock outcrop	20	Not rated		Not rated	
225:					
Palmich	65	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop	20	Not rated		Not rated	
226:					
Palmont	80	Low		Low	
227:					
Palmont	85	Low		Low	
228:					
Palmont	85	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
229:					
Palmont	55	Low		Low	
Rock outcrop	30	Not rated		Not rated	
230:					
Ramparter	85	Moderate		Low	
		Texture/coarse fragments	0.50		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
231:					
Ramparter	85	Low		Low	
232:					
Ramparter	80	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
233:					
Ramparter	80	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
234:					
Ramparter	85	Low		Low	
		Texture/coarse fragments	0.10		
235:					
Ramparter	85	Low		Low	
236:					
Ramparter	50	Moderate		Low	
		Texture/coarse fragments	0.50		
Wilma	30	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
237:					
Reggad	75	Low		High	
				Soil reaction	1.00
238:					
Reggad	40	Low		High	
				Soil reaction	1.00
Serene	35	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
239:					
Rock outcrop	90	Not rated		Not rated	
240:					
Rock outcrop	50	Not rated		Not rated	
Blewett	25	Low		Low	
241:					
Rock outcrop	50	Not rated		Not rated	
Borland	30	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
242:					
Rock outcrop	40	Not rated		Not rated	
Chumstick	25	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Icicle	15	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
243:					
Rock outcrop	40	Not rated		Not rated	
Chumstick	20	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Icicle	15	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
244:					
Rock outcrop	50	Not rated		Not rated	
Rubble land	20	Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated	
245:					
Rock outcrop	35	Not rated		Not rated	
Rubble land	25	Not rated		Not rated	
Serene	20	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
246:					
Rubble land	65	Not rated		Not rated	
Rock outcrop	20	Not rated		Not rated	
247:					
Safety	80	Low		Low	
248:					
Safety	80	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
249:					
Safety	85	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
250:					
Safety	70	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop	15	Not rated		Not rated	
251:					
Saska	75	Moderate		Low	
		Texture/coarse fragments	0.50		
252:					
Saska	75	Low		Low	
253:					
Saska	85	Low		Low	
254:					
Saska	80	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
255:					
Saska	85	Moderate		Low	
		Texture/coarse fragments	0.50		
256:					
Saska	85	Moderate		Low	
		Texture/coarse fragments	0.50		
257:					
Saska	65	Low		Low	
Rock outcrop	20	Not rated		Not rated	
258:					
Saska	40	Moderate		Low	
		Texture/coarse fragments	0.50		
Saska, bouldery	35	Moderate		Low	
		Texture/coarse fragments	0.50		
259:					
Saska, south	40	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
259:					
Saska	35	Moderate		Low	
		Texture/coarse fragments	0.50		
260:					
Saska	40	Low		Low	
Saska, bouldery	35	Moderate		Low	
		Texture/coarse fragments	0.50		
261:					
Saska	35	Low		Low	
Saska, bouldery	30	Moderate		Low	
		Texture/coarse fragments	0.50		
Rock outcrop	15	Not rated		Not rated	
262:					
Saska, south	35	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
Saska	30	Low		Low	
Rock outcrop	15	Not rated		Not rated	
263:					
Saydab	80	Low		Low	
264:					
Scotties	85	Moderate		Low	
		Texture/coarse fragments	0.50		
265:					
Serene	80	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
266:					
Serene	60	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop	25	Not rated		Not rated	
267:					
Serpen	85	Low		Low	
268:					
Serpen	80	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
269:					
Shadypass-----------	80	Moderate Texture/slope/ surface depth/ coarse fragments	 0.50	Low	
270:					
Shamel--------------	80	Low Texture/coarse fragments	 0.10	Low	
271:					
Shamel--------------	80	Low Texture/coarse fragments	 0.10	Low	
272:					
Shamel--------------	60	Low Texture/coarse fragments	 0.10	Low	
Rock outcrop--------	20	Not rated		Not rated	
273:					
Shaser--------------	40	Moderate Texture/coarse fragments	 0.50	Low	
Blewett-------------	40	Low		Low	
274:					
Shaser--------------	40	Moderate Texture/coarse fragments	 0.50	Low	
Brisky--------------	40	Low		Low	
275:					
Shaser--------------	60	Moderate Texture/coarse fragments	 0.50	Low	
Chapot--------------	20	Low		Low	
276:					
Skipeak-------------	80	Low Texture/coarse fragments	 0.10	Low	
277:					
Skipeak-------------	40	Low Texture/coarse fragments	 0.10	Low	
Line----------------	35	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
278:					
Soda	80	Moderate		Low	
		Texture/coarse fragments	0.50		
279:					
Soda	75	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
280:					
Soda	75	Low		Low	
281:					
Soda	85	Low		Low	
		Texture/coarse fragments	0.10		
282:					
Soda	85	Low		Low	
		Texture/coarse fragments	0.10		
283:					
Soda	65	Low		Low	
		Texture/coarse fragments	0.10		
Rock outcrop	15	Not rated		Not rated	
284:					
Soda	60	Low		Low	
Rock outcrop	20	Not rated		Not rated	
285:					
Soda	40	Moderate		Low	
		Texture/coarse fragments	0.50		
Soda, cold	35	Moderate		Low	
		Texture/coarse fragments	0.50		
286:					
Soda	40	Moderate		Low	
		Texture/coarse fragments	0.50		
Soda, cold	35	Low		Low	
287:					
Soda	35	Low		Low	
Soda, cold	30	Moderate		Low	
		Texture/coarse fragments	0.50		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire Rating class and limiting features	Value	Potential for seedling mortality Rating class and limiting features	Value
287:					
Rock outcrop	15	Not rated		Not rated	
288:					
Sodacreek	75	Moderate		Low	
		Texture/coarse fragments	0.50		
289:					
Sodacreek	70	Moderate		Low	
		Texture/coarse fragments	0.50		
Rock outcrop	15	Not rated		Not rated	
290:					
Spodic Vitrixerands	60	Moderate		High	
		Texture/coarse fragments	0.50	Wetness	1.00
Saska	30	Moderate		Low	
		Texture/coarse fragments	0.50		
291:					
Spodic Vitrixerands	50	Low		High	
				Wetness	1.00
Saska	35	Moderate		Low	
		Texture/coarse fragments	0.50		
292:					
Stemilt	80	Low		Low	
		Texture/coarse fragments	0.10		
293:					
Stemilt	80	Low		Low	
		Texture/coarse fragments	0.10		
294:					
Surgh	80	Low		Low	
295:					
Surgh	80	High		Low	
		Texture/slope/ surface depth coarse fragments	1.00		
296:					
Surgh	80	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
297:					
Surgh	40	Low		Low	
Wedge	40	Moderate Texture/coarse fragments	 0.50	Low	
298:					
Swakane	75	Low		Low	
299:					
Swakane	75	Low		Low	
300:					
Swakane	50	Moderate Texture/slope/ coarse fragments	 0.50	Low	
Rock outcrop	25	Not rated		Not rated	
301:					
Swakane	50	Low		Low	
Rock outcrop	35	Not rated		Not rated	
302:					
Switchback	80	Low Texture/coarse fragments	 0.10	Low	
303:					
Switchback	80	Low Texture/coarse fragments	 0.10	Low	
304:					
Switchback	75	Low Texture/coarse fragments	 0.10	Low	
305:					
Taneum	85	Low Texture/coarse fragments	 0.10	Low	
306:					
Thow	80	Moderate Texture/coarse fragments	 0.50	Low	
307:					
Thow	80	Low		Low	
308:					
Thow	80	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
309:					
Thow	30	Low		Low	
Domkey	30	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
Rock outcrop	20	Not rated		Not rated	
310:					
Thowson	85	Moderate		Low	
		Texture/coarse fragments	0.50		
311:					
Thowson	85	Moderate		Low	
		Texture/coarse fragments	0.50		
312:					
Thowson	85	Moderate		Low	
		Texture/coarse fragments	0.50		
313:					
Thowson	85	Moderate		Low	
		Texture/coarse fragments	0.50		
314:					
Thowson	75	Low		Low	
315:					
Thowson	60	Moderate		Low	
		Texture/coarse fragments	0.50		
Rock outcrop	15	Not rated		Not rated	
316:					
Thowson	60	Low		Low	
Rock outcrop	15	Not rated		Not rated	
317:					
Thowson	50	Low		Low	
Rock outcrop	30	Not rated		Not rated	
318:					
Thowson, stony	30	Low		Low	
Thowson	30	Moderate		Low	
		Texture/coarse fragments	0.50		
Rock outcrop	15	Not rated		Not rated	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
319:					
Tillicum	75	Low		Low	
320:					
Tillicum	85	Moderate		Low	
		Texture/coarse fragments	0.50		
321:					
Tillicum	85	Low		Low	
322:					
Tillmont	75	Moderate		Low	
		Texture/coarse fragments	0.50		
323:					
Tillmont	75	Low		Low	
324:					
Tillmont	40	Low		Low	
Inkler	35	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
325:					
Tiptop	85	Low		Low	
326:					
Tiptop	40	Low		Low	
Naxing	35	Low		Low	
327:					
Totem	85	Low		Low	
		Texture/coarse fragments	0.10		
328:					
Totem	80	Low		Low	
329:					
Totem	80	Low		Low	
330:					
Totem	60	Low		Low	
Chiwaukum	20	Low		Low	
331:					
Treen	80	Low		Low	
		Texture/coarse fragments	0.10		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
332:					
Treen---------------	50	Low		Low	
		Texture/coarse fragments	0.10		
Klapatche-----------	30	High		Low	
		Texture/slope/ surface depth	1.00		
333:					
Tronsen-------------	80	Low		Low	
		Texture/coarse fragments	0.10		
334:					
Tronsen-------------	80	Low		Low	
		Texture/coarse fragments	0.10		
335:					
Tyee----------------	75	High		Low	
		Texture/slope/ coarse fragments	1.00		
336:					
Tyee----------------	85	Low		Low	
		Texture/coarse fragments	0.10		
337:					
Tyee----------------	75	Low		Low	
		Texture/coarse fragments	0.10		
338:					
Tyee----------------	45	Low		Low	
		Texture/coarse fragments	0.10		
Bisping-------------	30	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
339:					
Typic Cryaquands----	80	Low		High	
		Texture/coarse fragments	0.10	Wetness	1.00
340:					
Vabbing-------------	80	Low		Low	
341:					
Vabbing-------------	80	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
342:					
Vabbing	40	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
Gilpar	35	Moderate		Low	
		Texture/slope/ coarse fragments	0.50		
343:					
Vabbing	70	High		Low	
		Texture/slope/ surface depth/ coarse fragments	1.00		
Rock outcrop	20	Not rated		Not rated	
344:					
Vabus	75	Low		Low	
		Texture/coarse fragments	0.10		
345:					
Vabus	75	Low		Low	
346:					
Vabus	40	Low		Low	
		Texture/coarse fragments	0.10		
Chinkmin	35	Low		Low	
347:					
Vabus	40	Low		Low	
Chinkmin	35	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
348:					
Varelum	85	Moderate		Low	
		Texture/coarse fragments	0.50		
349:					
Varelum	85	Moderate		Low	
		Texture/coarse fragments	0.50		
350:					
Varelum	85	Moderate		Low	
		Texture/coarse fragments	0.50		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
351:					
Varelum	80	Moderate		Low	
		Texture/coarse fragments	0.50		
352:					
Vitricryands	75	Moderate		Low	
		Texture/coarse fragments	0.50		
353:					
Vitricryands	45	Moderate		Low	
		Texture/coarse fragments	0.50		
Rock outcrop	30	Not rated		Not rated	
354:					
Wagberg	80	Low		Low	
		Texture/coarse fragments	0.10		
355:					
Wagberg	80	Low		Low	
356:					
Wagberg	40	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Wagberg, south	40	Low		Low	
357:					
Wagberg	30	Low		Low	
Swakane	30	Low		Low	
Rock outcrop	20	Not rated		Not rated	
358:					
Wedge	80	Moderate		Low	
		Texture/coarse fragments	0.50		
359:					
Wedge	50	Low		Low	
360:					
Wedge	80	Moderate		Low	
		Texture/coarse fragments	0.50		
361:					
Wedge	80	Low		Low	

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
362:					
Wedge	60	Moderate		Low	
		Texture/coarse fragments	0.50		
Typic Cryaquands	30	Low		High	
		Texture/coarse fragments	0.10	Wetness	1.00
363:					
Wedge	50	Low		Low	
Wedge, cold	30	Low		Low	
364:					
Wedgemont	85	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
365:					
Wilma	75	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
366:					
Wilma	75	Moderate		Low	
		Texture/slope/ surface depth/ coarse fragments	0.50		
Rock outcrop	15	Not rated		Not rated	
367:					
Yaxing	80	Low		Low	
		Texture/coarse fragments	0.10		
368:					
Yaxing	85	Low		Low	
		Texture/coarse fragments	0.10		
369:					
Yaxon	85	Low		Low	
		Texture/coarse fragments	0.10		
370:					
Yaxon	85	Low		Low	
		Texture/coarse fragments	0.10		
371:					
Yaxon	85	Low		Low	
		Texture/coarse fragments	0.10		

Table 8e.--Forest Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
372:					
Yaxon	85	Low		Low	
		Texture/coarse fragments	0.10		
373:					
Yaxon	85	Low		Low	
		Texture/coarse fragments	0.10		
374:					
Zeb	75	Low		Low	
W:					
Water	100	Not rated		Not rated	

Table 9a.--Recreation (Part I)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
2:							
Almac	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
3:							
Almac	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
4:							
Almac	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
5:							
Almac	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Azwell	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Depth to bedrock	0.80
						Dusty	0.50
						Content of large stones	0.20
6:							
Almac	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Azwell	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Depth to bedrock	0.80
						Dusty	0.50
						Content of large stones	0.20
Rock outcrop	15	Not rated		Not rated		Not rated	
7:							
Almac	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8:							
Alnult	70	Very limited Slope Content of large stones	 1.00 1.00	Very limited Slope Content of large stones	 1.00 1.00	Very limited Content of large stones Slope	 1.00 1.00
Reggad	15	Very limited Slope Content of large stones	 1.00 1.00	Very limited Slope Content of large stones	 1.00 1.00	Very limited Slope Content of large stones Gravel content	 1.00 1.00 0.88
9:							
Altapeak	85	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 0.41	Very limited Gravel content Slope	 1.00 1.00
10:							
Altapeak	75	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 1.00
11:							
Altapeak	75	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 1.00
12:							
Altapeak	80	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 1.00
13:							
Altapeak	40	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 1.00
Alnult	30	Very limited Slope Content of large stones	 1.00 1.00	Very limited Slope Content of large stones	 1.00 1.00	Very limited Content of large stones Slope	 1.00 1.00
14:							
Altapeak	40	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 1.00
Alnult	30	Very limited Slope Content of large stones	 1.00 1.00	Very limited Slope Content of large stones	 1.00 1.00	Very limited Content of large stones Slope	 1.00 1.00
15:							
Altapeak	40	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 0.41	Very limited Slope Gravel content	 1.00 1.00

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
15:							
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	1.00	Content of large stones	1.00	Slope	1.00
16:							
Anatone-------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Content of large stones	0.04	Content of large stones	0.04	Content of large stones	1.00
						Gravel content	0.01
Blewett-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.93	Gravel content	0.93	Depth to bedrock	1.00
						Content of large stones	0.74
17:							
Anatone-------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Content of large stones	0.04	Content of large stones	0.04	Content of large stones	1.00
						Gravel content	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
18:							
Andic Cryochrepts---	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.77	Content of large stones	0.77	Slope	1.00
						Gravel content	0.41
19:							
Andic Cryumbrepts---	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.08
20:							
Andic Cryumbrepts---	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Content of large stones	0.08
21:							
Andic Cryumbrepts---	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Content of large stones	0.08

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21:							
Haplocryods---------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
Rock outcrop--------	15	Not rated		Not rated		Not rated	
22:							
Andic Cryumbrepts---	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Content of large stones	0.08
Rock outcrop--------	20	Not rated		Not rated		Not rated	
23:							
Andic Cryumbrepts---	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
Rock outcrop--------	30	Not rated		Not rated		Not rated	
24:							
Andic Haplumbrepts--	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.92	Gravel content	0.92	Slope	1.00
						Depth to bedrock	0.54
						Content of large stones	0.08
Rock outcrop--------	30	Not rated		Not rated		Not rated	
25:							
Angle---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.68	Too sandy	0.68	Too sandy	0.68
						Content of large stones	0.01
26:							
Aquic Cryumprepts---	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Too sandy	0.92	Flooding	1.00
		Too sandy	0.92	Flooding	0.40	Too sandy	0.92
						Slope	0.50
27:							
Ardening------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.24
						Content of large stones	0.20
28:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
29:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
30:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
31:							
Ardenmont-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Swakane-------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.92
32:							
Ardenvoir-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.35	Gravel content	0.35	Slope	1.00
						Content of large stones	0.74
33:							
Ardenvoir-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.35	Gravel content	0.35	Slope	1.00
						Content of large stones	0.74
34:							
Azwell--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Depth to bedrock	0.80
						Dusty	0.50
						Content of large stones	0.20
Rock outcrop--------	15	Not rated		Not rated		Not rated	
35:							
Bagmont-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.16	Gravel content	0.16	Dusty	0.50
						Content of large stones	0.03
						Depth to bedrock	0.01
36:							
Bigcreek------------	85	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.14	Gravel content	0.14	Gravel content	1.00
						Slope	0.50

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
37:							
Billyridge----------	75	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Slope	0.50
						Content of large stones	0.20
38:							
Billyridge----------	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.20
39:							
Billyridge----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.20
40:							
Bisping-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
						Gravel content	0.18
41:							
Bisping-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
42:							
Bisping-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
43:							
Bjork---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Depth to bedrock	0.90
						Dusty	0.50
						Gravel content	0.04
44:							
Bjork---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
						Depth to bedrock	0.46
						Gravel content	0.03
						Content of large stones	0.01
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
45:							
Blag	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Depth to bedrock	1.00
Cle Elum	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.80
Rock outcrop	15	Not rated		Not rated		Not rated	
46:							
Blag	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Depth to bedrock	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
47:							
Blewett	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.93	Gravel content	0.93	Depth to bedrock	1.00
						Content of large stones	0.74
Rock outcrop	20	Not rated		Not rated		Not rated	
48:							
Borland	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
49:							
Borland	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
50:							
Brief	85	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
						Slope	1.00
51:							
Brisky	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.94	Gravel content	0.94	Depth to bedrock	1.00
						Content of large stones	0.20
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52:							
Burch	85	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
						Dusty	0.50
53:							
Burnscreek	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.54
						Gravel content	0.05
54:							
Burrant	85	Not limited		Not limited		Very limited	
						Slope	1.00
55:							
Burrant	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
56:							
Cashmont	80	Not limited		Not limited		Somewhat limited	
						Gravel content	0.50
						Slope	0.50
57:							
Cashmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
58:							
Chapot	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.84	Content of large stones	0.84	Slope	1.00
						Gravel content	0.01
59:							
Chinkmin	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.03	Depth to saturated zone	0.02	Depth to saturated zone	0.03
						Content of large stones	0.01
60:							
Chinkmin	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.03	Depth to saturated zone	0.02	Depth to saturated zone	0.03
						Content of large stones	0.01

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61:							
Chinkmin	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.03	Depth to saturated zone	0.02	Depth to saturated zone	0.03
						Content of large stones	0.01
Altapeak	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.41	Gravel content	0.41	Slope	1.00
62:							
Chinkmin	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.03	Depth to saturated zone	0.02	Depth to saturated zone	0.03
						Content of large stones	0.01
Altapeak	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
63:							
Chiwaukum	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.32
64:							
Chiwaukum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.74
65:							
Chiwaukum	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.74
66:							
Chiwaukum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
67:							
Chiwaukum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.32
Chiwaukum, south	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.74

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68:							
Chiwaukum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.32
Chiwaukum, south	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.74
69:							
Chiwawa	85	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.50	Gravel content	0.50	Gravel content	1.00
70:							
Choralmont, till substratum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00
Choralmont	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00
71:							
Choralmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00
72:							
Choralmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00
73:							
Choralmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00
74:							
Choralmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00
75:							
Choralmont	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00
Limking	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
						Gravel content	0.01

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
76:							
Chumstick-----------	75	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.74
						Gravel content	0.54
77:							
Chumstick-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Content of large stones	0.74
						Gravel content	0.54
78:							
Chumstick-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Content of large stones	0.74
						Gravel content	0.54
79:							
Cle Elum------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.06
80:							
Cle Elum------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.06
81:							
Coopmont------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
82:							
Coopmont------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
83:							
Cowiche-------------	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Cowiche, very deep--	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
84:							
Cowiche-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
84:							
Cowiche, very deep--	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
85:							
Cryomont------------	80	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Gravel content	0.09	Gravel content	0.09	Gravel content	1.00
						Content of large stones	0.20
						Slope	0.12
86:							
Cryomont------------	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Slope	1.00	Gravel content	1.00
		Slope	1.00	Gravel content	0.09	Slope	1.00
		Gravel content	0.09			Content of large stones	0.20
87:							
Cryomont------------	40	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Content of large stones	0.99
						Slope	0.12
Cryomont, fan-------	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Content of large stones	0.01	Gravel content	1.00
		Content of large stones	0.01	Gravel content	0.01	Content of large stones	0.99
		Gravel content	0.01				
88:							
Culving-------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Depth to bedrock	0.99
						Dusty	0.50
						Content of large stones	0.11
Rock outcrop--------	20	Not rated		Not rated		Not rated	
89:							
Culvop--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.89	Gravel content	0.89	Depth to bedrock	1.00
						Content of large stones	0.38

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
90:							
Devore	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Content of large stones	0.99
						Depth to bedrock	0.84
Rock outcrop	15	Not rated		Not rated		Not rated	
91:							
Dinkelman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
92:							
Dinkelman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
93:							
Dinkelman	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
Rock outcrop	25	Not rated		Not rated		Not rated	
94:							
Dinkels	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.04
95:							
Dinkels	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.04
96:							
Dinkels	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
97:							
Domkey	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
98:							
Domkey	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
99:							
Domkey	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
McCree	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
100:							
Dragoon	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Gravel content	0.22
101:							
Dragoon	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.71
102:							
Entiat	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
103:							
Entiat	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
Rock outcrop	25	Not rated		Not rated		Not rated	
104:							
Entic Haplumbrepts	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.42	Content of large stones	0.42	Slope	1.00
						Gravel content	0.08
105:							
Esmeralda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.84

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106:							
Esmeralda	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.84
Rock outcrop	35	Not rated		Not rated		Not rated	
107:							
Fears	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Gravel content	0.01
108:							
Fears	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Gravel content	0.01
Devore	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Content of large stones	0.99
						Depth to bedrock	0.84
109:							
Fernow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
110:							
Fernow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
111:							
Fernow	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Serene	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
112:							
Fluvaquents	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
113:							
Georgecreek	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
						Gravel content	0.22

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
114:							
Georgecreek---------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
115:							
Georgecreek---------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
116:							
Georgecreek---------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
						Gravel content	0.22
Dragoon-------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
						Depth to bedrock	0.90
						Gravel content	0.22
117:							
Georgecreek---------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
Dragoon-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Gravel content	0.22
118:							
Gilpar--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Content of large stones	1.00
119:							
Gilpar--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Content of large stones	1.00
Nimue---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
120:							
Gilpar--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Content of large stones	1.00

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
120:							
Nimue	25	Very limited Slope Content of large stones	 1.00 0.02	Very limited Slope Content of large stones	 1.00 0.02	Very limited Slope Content of large stones Gravel content	 1.00 1.00 0.14
Rock outcrop	20	Not rated		Not rated		Not rated	
121:							
Gilpar	60	Very limited Slope Content of large stones Gravel content	 1.00 0.05 0.01	Very limited Slope Content of large stones Gravel content	 1.00 0.05 0.01	Very limited Slope Gravel content Content of large stones	 1.00 1.00 1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak	85	Very limited Slope Gravel content	 1.00 0.14	Very limited Slope Gravel content	 1.00 0.14	Very limited Slope Gravel content	 1.00 1.00
124:							
Goffpeak	40	Very limited Slope Gravel content	 1.00 0.14	Very limited Slope Gravel content	 1.00 0.14	Very limited Slope Gravel content	 1.00 1.00
Fears	35	Very limited Slope Content of large stones	 1.00 0.01	Very limited Slope Content of large stones	 1.00 0.01	Very limited Slope Content of large stones Gravel content	 1.00 0.99 0.01
125:							
Haplocryods, cold	45	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.20
Haplocryods, stony	30	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Depth to bedrock	 1.00 0.84
126:							
Haplocryods	40	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content	 1.00 0.04
Andic Cryochrepts	20	Very limited Slope Content of large stones	 1.00 0.77	Very limited Slope Content of large stones	 1.00 0.77	Very limited Content of large stones Slope Gravel content	 1.00 1.00 0.41
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
127:							
Haploxerolls--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.81	Gravel content	0.81	Gravel content	1.00
						Content of large stones	0.84
128:							
Haploxerolls--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.81	Gravel content	0.81	Gravel content	1.00
						Content of large stones	0.84
129:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
						Content of large stones	0.08
						Depth to bedrock	0.01
Andic Cryumbrepts---	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Slope	1.00
						Content of large stones	0.08
130:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
						Content of large stones	0.08
						Depth to bedrock	0.01
Andic Cryochrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.77	Content of large stones	0.77	Slope	1.00
						Gravel content	0.41
Rock outcrop--------	20	Not rated		Not rated		Not rated	
131:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
						Content of large stones	0.08
						Depth to bedrock	0.01
Andic Cryumbrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
132:							
Hyprairie-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
133:							
Hyprairie-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
134:							
Hyprairie-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Oldbutte------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
135:							
Icicle, south-------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.49
						Content of large stones	0.20
Icicle--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.92
						Gravel content	0.22
136:							
Icicle--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.49
						Content of large stones	0.20
137:							
Icicle--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.92
						Gravel content	0.22
138:							
Icicle--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.92
						Gravel content	0.22
139:							
Icicle--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.49
						Content of large stones	0.20

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
140:							
Icicle	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.88	Content of large stones	0.88	Slope	1.00
Chumstick	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Content of large stones	0.74
						Gravel content	0.54
Rock outcrop	25	Not rated		Not rated		Not rated	
141:							
Icicle	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.88	Content of large stones	0.88	Slope	1.00
Chumstick	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
						Content of large stones	0.74
						Gravel content	0.54
Rock outcrop	25	Not rated		Not rated		Not rated	
142:							
Inkler	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.32
143:							
Isella	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fernow	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
144:							
Isella	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fernow	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
145:							
Isella	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
145:							
Nimue	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
146:							
Isella	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Nimue	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
147:							
Kingmont	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.04	Gravel content	0.04	Gravel content	1.00
						Content of large stones	0.54
148:							
Kladnick	85	Not limited		Not limited		Somewhat limited	
						Content of large stones	0.92
						Gravel content	0.65
						Slope	0.50
149:							
Kladnick	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.02	Gravel content	0.02	Slope	1.00
						Content of large stones	0.03
150:							
Kladnick	80	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.88	Gravel content	0.88	Gravel content	1.00
		Content of large stones	0.08	Content of large stones	0.08	Content of large stones	1.00
		Slope	0.04	Slope	0.04	Slope	1.00
151:							
Klapatche	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.50	Too sandy	0.50	Content of large stones	0.95
		Content of large stones	0.01	Content of large stones	0.01	Too sandy	0.50
						Depth to bedrock	0.03
Altapeak	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
152:							
Kloochman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.11	Gravel content	0.11	Slope	1.00
						Depth to bedrock	0.16
						Content of large stones	0.01
153:							
Kloochman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Depth to bedrock	0.16
						Content of large stones	0.01
154:							
Kloochman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Depth to bedrock	0.16
						Content of large stones	0.01
155:							
Kloochman-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Depth to bedrock	0.16
						Content of large stones	0.01
Inkler--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.32
156:							
Kloochman-----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Depth to bedrock	0.06
						Content of large stones	0.01
Inkler--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.32
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157:							
Kloochman-----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Depth to bedrock	0.06
						Content of large stones	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
158:							
Limking-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
						Gravel content	0.01
159:							
Limking-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
						Gravel content	0.01
Coopmont------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
160:							
Limking-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
						Gravel content	0.01
Coopmont------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
161:							
Limking-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
						Gravel content	0.01
Coopmont------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
162:							
Limking-------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
						Gravel content	0.01

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
162:							
Rock outcrop--------	20	Not rated		Not rated		Not rated	
163:							
Line----------------	85	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
164:							
Line----------------	85	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
165:							
Line----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.95	Gravel content	0.95	Slope	1.00
						Content of large stones	0.38
166:							
Line----------------	40	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Vabbing-------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Slope	1.00
						Content of large stones	0.11
167:							
Loneridge-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
						Content of large stones	0.20
168:							
Loneridge-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
						Content of large stones	0.20
169:							
Loneridge-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Content of large stones	0.95
		Content of large stones	0.01	Content of large stones	0.01	Restricted permeability	0.41

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
170:							
Macreeing-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.78
						Content of large stones	0.68
171:							
Macreeing-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.78
						Content of large stones	0.68
172:							
Macreeing-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.78
						Content of large stones	0.68
Rock outcrop--------	30	Not rated		Not rated		Not rated	
173:							
Mansonia------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.16
						Content of large stones	0.01
174:							
Mansonia------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.99
Swakane-------------	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.92
Rock outcrop--------	20	Not rated		Not rated		Not rated	
175:							
Mansonia------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.99
Swakane-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.92
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
176:							
Marmont-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
						Gravel content	0.99
177:							
Marmont-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.99
178:							
Marmont-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.99
179:							
McCree--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
180:							
McCree--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
181:							
McCree--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
182:							
McCree--------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
Palmich-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
183:							
McCree--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
183:							
Palmont	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.03
Rock outcrop	15	Not rated		Not rated		Not rated	
184:							
McCree	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
Rock outcrop	25	Not rated		Not rated		Not rated	
185:							
Mippon	75	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Depth to saturated zone	0.75	Gravel content	1.00
		Depth to saturated zone	0.98	Gravel content	0.25	Depth to saturated zone	0.98
		Gravel content	0.25			Flooding	0.60
186:							
Mippon	75	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Gravel content	0.98	Gravel content	1.00
		Gravel content	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Depth to saturated zone	0.98	Too sandy	0.57	Flooding	0.60
		Too sandy	0.57			Too sandy	0.57
						Content of large stones	0.20
187:							
Mippon	75	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Depth to saturated zone	0.75	Content of large stones	1.00
		Depth to saturated zone	0.98	Too sandy	0.60	Gravel content	1.00
		Too sandy	0.60	Content of large stones	0.20	Depth to saturated zone	0.98
		Content of large stones	0.20	Gravel content	0.06	Too sandy	0.60
		Gravel content	0.06			Flooding	0.60
188:							
Morical	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
						Depth to bedrock	0.03
189:							
Morical	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
190:							
Morical	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.06

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
191:							
Morical	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
Dragoon	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.71
192:							
Morical	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Gravel content	0.22
193:							
Morical	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Gravel content	0.22
194:							
Morical	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	1.00
						Gravel content	0.22
195:							
Mountaineer	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.10	Content of large stones	0.10	Content of large stones	1.00
						Gravel content	0.70
						Depth to bedrock	0.01
196:							
Mountaineer	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.10	Content of large stones	0.10	Content of large stones	1.00
						Gravel content	0.70
						Depth to bedrock	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
197:							
Mountaineer	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.10	Content of large stones	0.10	Content of large stones	1.00
						Gravel content	0.70
						Depth to bedrock	0.01
Tillicum	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.04
Rock outcrop	15	Not rated		Not rated		Not rated	
198:							
Nahahum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
199:							
Nahahum	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Taneum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
						Content of large stones	0.03
200:							
Nard	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
201:							
Nard	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
202:							
Nard	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Blag	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Depth to bedrock	1.00
203:							
Nard	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Brisky	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.94	Gravel content	0.94	Depth to bedrock	1.00
						Content of large stones	0.20

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
204:							
Nardine-------------	85	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.83	Depth to saturated zone	1.00
						Slope	0.50
205:							
Nardmont------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
206:							
Nardmont------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
207:							
Natapoc-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.12
						Content of large stones	0.05
208:							
Natapoc-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.12
						Content of large stones	0.05
209:							
Natapoc-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.12
						Content of large stones	0.05
Thow----------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
210:							
Naxing--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.61	Content of large stones	0.61	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Dusty	0.50
211:							
Naxing--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.61	Content of large stones	0.61	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Dusty	0.50

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
212:							
Newbell-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.89
						Content of large stones	0.26
213:							
Nimue---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
214:							
Nimue---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
215:							
Nimue---------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
Rock outcrop--------	20	Not rated		Not rated		Not rated	
216:							
Nimue---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
Nimue, dry----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
217:							
Nimue, dry----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
Nimue---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Gravel content	0.14
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
218:							
Oldbutte------------	85	Not limited		Not limited		Very limited	
						Slope	1.00
219:							
Oldbutte------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
220:							
Palmich-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
221:							
Palmich-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
222:							
Palmich-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
223:							
Palmich-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
McCree--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
224:							
Palmich-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
McCree--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
225:							
Palmich	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.11	Gravel content	0.11	Gravel content	1.00
						Content of large stones	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
226:							
Palmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.03
227:							
Palmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.03
228:							
Palmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Content of large stones	0.32
229:							
Palmont	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.03
Rock outcrop	30	Not rated		Not rated		Not rated	
230:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.11
231:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.11
232:							
Ramparter	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.11

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
233:							
Ramparter-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.11
234:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.06
235:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.06
236:							
Ramparter-----------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.11
Wilma---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.91
						Content of large stones	0.20
						Depth to bedrock	0.03
237:							
Reggad--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
						Gravel content	0.88
238:							
Reggad--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
						Gravel content	0.88
Serene--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
239:							
Rock outcrop--------	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
240:							
Blewett	25	Very limited Slope Depth to bedrock Gravel content	 1.00 1.00 0.93	Very limited Slope Depth to bedrock Gravel content	 1.00 1.00 0.93	Very limited Gravel content Slope Depth to bedrock Content of large stones	 1.00 1.00 1.00 0.74
241:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Borland	30	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00
242:							
Rock outcrop	40	Not rated		Not rated		Not rated	
Chumstick	25	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock Content of large stones Gravel content	 1.00 1.00 0.74 0.54
Icicle	15	Very limited Slope Content of large stones	 1.00 0.88	Very limited Slope Content of large stones	 1.00 0.88	Very limited Content of large stones Slope	 1.00 1.00
243:							
Rock outcrop	40	Not rated		Not rated		Not rated	
Chumstick	20	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock Content of large stones Gravel content	 1.00 1.00 0.74 0.54
Icicle	15	Very limited Slope Content of large stones	 1.00 0.88	Very limited Slope Content of large stones	 1.00 0.88	Very limited Content of large stones Slope	 1.00 1.00
244:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Rubble land	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop	35	Not rated		Not rated		Not rated	
Rubble land	25	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
245:							
Serene--------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
246:							
Rubble land---------	65	Not rated		Not rated		Not rated	
Rock outcrop--------	20	Not rated		Not rated		Not rated	
247:							
Safety--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Content of large stones	0.01
248:							
Safety--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Content of large stones	0.01
249:							
Safety--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Content of large stones	0.01
250:							
Safety--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.90
						Content of large stones	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
251:							
Saska---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.37
						Content of large stones	0.01
252:							
Saska---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.37
						Content of large stones	0.01

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
253:							
Saska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.03
254:							
Saska	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.03
255:							
Saska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Gravel content	0.14
256:							
Saska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Gravel content	0.14
257:							
Saska	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.37
						Content of large stones	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
258:							
Saska	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.37
						Content of large stones	0.01
Saska, bouldery	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Gravel content	0.14
259:							
Saska, south	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.03
Saska	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Gravel content	0.14

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
260:							
Saska	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.37
						Content of large stones	0.01
Saska, bouldery	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Gravel content	0.14
261:							
Saska	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.37
						Content of large stones	0.01
Saska, bouldery	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Gravel content	0.14
Rock outcrop	15	Not rated		Not rated		Not rated	
262:							
Saska, south	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.03
Saska	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.37
						Content of large stones	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
263:							
Saydab	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Content of large stones	0.42	Content of large ztones	0.42	Slope	1.00
		Gravel content	0.04	Gravel content	0.04	Dusty	0.50
						Depth to bedrock	0.01
264:							
Scotties	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.11	Gravel content	0.11	Dusty	0.50
						Content of large stones	0.01

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
265:							
Serene	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
266:							
Serene	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
Rock outcrop	25	Not rated		Not rated		Not rated	
267:							
Serpen	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
						Content of large stones	0.11
268:							
Serpen	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
						Content of large stones	0.11
269:							
Shadypass	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
270:							
Shamel	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.06
271:							
Shamel	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.06
272:							
Shamel	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.06
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
273:							
Shaser	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Blewett	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.93	Gravel content	0.93	Depth to bedrock	1.00
						Content of large stones	0.74
274:							
Shaser	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Brisky	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.94	Gravel content	0.94	Depth to bedrock	1.00
						Content of large stones	0.20
275:							
Shaser	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Chapot	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
276:							
Skipeak	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.41	Gravel content	0.41	Slope	1.00
277:							
Skipeak	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.41	Gravel content	0.41	Slope	1.00
Line	35	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
278:							
Soda	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
279:							
Soda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
280:							
Soda	75	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.38
281:							
Soda	85	Very limited Slope Gravel content	 1.00 0.01	Very limited Slope Gravel content	 1.00 0.01	Very limited Slope Gravel content Content of large stones	 1.00 1.00 0.38
282:							
Soda	85	Very limited Slope Gravel content	 1.00 0.01	Very limited Slope Gravel content	 1.00 0.01	Very limited Slope Gravel content Content of large stones	 1.00 1.00 0.38
283:							
Soda	65	Very limited Slope Gravel content	 1.00 0.01	Very limited Slope Gravel content	 1.00 0.01	Very limited Slope Gravel content Content of large stones	 1.00 1.00 0.38
Rock outcrop	15	Not rated		Not rated		Not rated	
284:							
Soda	60	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.38
Rock outcrop	20	Not rated		Not rated		Not rated	
285:							
Soda	40	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.20
Soda, cold	35	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.38
286:							
Soda	40	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.20
Soda, cold	35	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.38

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
287:							
Soda	35	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.38
Soda, cold	30	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.20
Rock outcrop	15	Not rated		Not rated		Not rated	
288:							
Sodacreek	75	Very limited Slope Depth to saturated zone	 1.00 0.88	Very limited Slope Depth to saturated zone	 1.00 0.56	Very limited Slope Depth to saturated zone Content of large stones	 1.00 0.88 0.20
289:							
Sodacreek	70	Very limited Slope Depth to saturated zone	 1.00 0.88	Very limited Slope Depth to saturated zone	 1.00 0.56	Very limited Slope Depth to saturated zone Content of large stones	 1.00 0.88 0.20
Rock outcrop	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Very limited Depth to saturated zone Slope	 1.00 1.00	Very limited Depth to saturated zone Slope	 1.00 1.00	Very limited Depth to saturated zone Slope	 1.00 1.00
Saska	30	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content Content of large stones	 1.00 0.37 0.01
291:							
Spodic Vitrixerands	50	Very limited Depth to saturated zone Slope	 1.00 1.00	Very limited Slope Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Slope	 1.00 1.00
Saska	35	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content Content of large stones	 1.00 0.37 0.01

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
292:							
Stemilt	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.93
						Content of large stones	0.11
293:							
Stemilt	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.93
						Content of large stones	0.11
294:							
Surgh	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.03
						Content of large stones	0.01
295:							
Surgh	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.03
						Content of large stones	0.01
296:							
Surgh	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.03
						Content of large stones	0.01
297:							
Surgh	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	1.00
		Gravel content	0.06	Gravel content	0.06	Gravel content	1.00
Wedge	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
298:							
Swakane	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.92

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
299:							
Swakane-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.92
300:							
Swakane-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.92
Rock outcrop--------	25	Not rated		Not rated		Not rated	
301:							
Swakane-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.92
Rock outcrop--------	35	Not rated		Not rated		Not rated	
302:							
Switchback----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Slope	1.00
						Depth to bedrock	0.80
						Content of large stones	0.08
303:							
Switchback----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.80
						Content of large stones	0.08
304:							
Switchback----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.80
						Content of large stones	0.08
305:							
Taneum--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
						Content of large stones	0.03

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
306:							
Thow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
307:							
Thow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
308:							
Thow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
309:							
Thow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.41	Gravel content	0.41	Gravel content	1.00
Domkey	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
Rock outcrop	20	Not rated		Not rated		Not rated	
310:							
Thowson	85	Not limited		Not limited		Somewhat limited	
						Gravel content	0.72
						Slope	0.50
311:							
Thowson	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.72
312:							
Thowson	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.72
313:							
Thowson	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.72
314:							
Thowson	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.16
						Content of large stones	0.01
315:							
Thowson	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.16
						Content of large stones	0.01

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
315:							
Rock outcrop	15	Not rated		Not rated		Not rated	
316:							
Thowson	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.16
						Content of large stones	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
317:							
Thowson	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.16
						Content of large stones	0.01
Rock outcrop	30	Not rated		Not rated		Not rated	
318:							
Thowson, stony	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.16
						Content of large stones	0.01
Thowson	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.72
Rock outcrop	15	Not rated		Not rated		Not rated	
319:							
Tillicum	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.04
320:							
Tillicum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.04
321:							
Tillicum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.04
322:							
Tillmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00
323:							
Tillmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
324:							
Tillmont------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.50	Gravel content	0.50	Slope	1.00
Inkler--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.32
325:							
Tiptop--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.94	Gravel content	0.94	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
						Content of large stones	0.20
326:							
Tiptop--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.94	Gravel content	0.94	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
						Content of large stones	0.20
Naxing--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.61	Content of large stones	0.61	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Dusty	0.50
327:							
Totem---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
328:							
Totem---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
329:							
Totem---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
330:							
Totem---------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Chiwaukum-----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.74
331:							
Treen---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
332:							
Treen---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
Klapatche-----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.42	Too sandy	0.42	Content of large stones	0.95
		Content of large stones	0.01	Content of large stones	0.01	Too sandy	0.42
						Depth to bedrock	0.03
333:							
Tronsen-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Content of large stones	0.84
						Gravel content	0.71
						Restricted permeability	0.41
334:							
Tronsen-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Content of large stones	0.84
						Gravel content	0.71
						Restricted permeability	0.41
335:							
Tyee----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too sandy	0.45	Too sandy	0.45	Gravel content	1.00
		Gravel content	0.36	Gravel content	0.36	Too sandy	0.45
						Content of large stones	0.01
336:							
Tyee----------------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.36	Gravel content	0.36	Slope	1.00
						Content of large stones	0.01
337:							
Tyee----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.36	Gravel content	0.36	Gravel content	1.00
						Content of large stones	0.01

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
338:							
Tyee----------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.36	Gravel content	0.36	Gravel content	1.00
						Content of large stones	0.01
Bisping-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
339:							
Typic Cryaquands----	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Slope	0.12
340:							
Vabbing-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Slope	1.00
						Content of large stones	0.11
341:							
Vabbing-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.11
342:							
Vabbing-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.11
Gilpar--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Content of large stones	1.00
343:							
Vabbing-------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Content of large stones	0.11
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
344:							
Vabus	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Depth to saturated zone	0.98
345:							
Vabus	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Depth to saturated zone	0.98
346:							
Vabus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Depth to saturated zone	0.98
Chinkmin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.03	Depth to saturated zone	0.02	Depth to saturated zone	0.03
						Content of large stones	0.01
347:							
Vabus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Depth to saturated zone	0.98
Chinkmin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.03	Depth to saturated zone	0.02	Depth to saturated zone	0.03
						Content of large stones	0.01
348:							
Varelum	85	Not limited		Not limited		Very limited	
						Slope	1.00
349:							
Varelum	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
350:							
Varelum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
351:							
Varelum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
352:							
Vitricryands	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.80
353:							
Vitricryands	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.80
Rock outcrop	30	Not rated		Not rated		Not rated	
354:							
Wagberg	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.13	Gravel content	0.13	Gravel content	1.00
						Content of large stones	0.38
355:							
Wagberg	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.13	Gravel content	0.13	Gravel content	1.00
						Content of large stones	0.38
356:							
Wagberg	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.13	Gravel content	0.13	Gravel content	1.00
						Content of large stones	0.38
Wagberg, south	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
357:							
Wagberg	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.13	Gravel content	0.13	Gravel content	1.00
						Content of large stones	0.38
Swakane	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.08	Gravel content	0.08	Gravel content	1.00
						Content of large stones	0.92
Rock outcrop	20	Not rated		Not rated		Not rated	
358:							
Wedge	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
359:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
360:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
361:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
362:							
Wedge---------------	60	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.18	Gravel content	0.18	Gravel content	1.00
						Slope	1.00
Typic Cryaquands----	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Slope	1.00
363:							
Wedge---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
Wedge, cold---------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.18	Gravel content	0.18	Slope	1.00
364:							
Wedgemont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
365:							
Wilma---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.91
						Content of large stones	0.20
						Depth to bedrock	0.03
366:							
Wilma---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.91
						Content of large stones	0.20
						Depth to bedrock	0.03
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 9a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
367:							
Yaxing	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
368:							
Yaxing	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
369:							
Yaxon	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
370:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
371:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
372:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
373:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
374:							
Zeb	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.54
						Gravel content	0.36
W:							
Water	100	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
2:							
Almac	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
3:							
Almac	80	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		
4:							
Almac	80	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		
5:							
Almac	40	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		
Azwell	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Droughty	0.92
						Depth to bedrock	0.80
						Content of large stones	0.20
						Gravel content	0.01
6:							
Almac	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Water erosion	1.00	Water erosion	1.00		
Azwell	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Droughty	0.92
						Depth to bedrock	0.80
						Content of large stones	0.20
						Gravel content	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7:							
Almac	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Water erosion	1.00	Water erosion	1.00		
Rock outcrop	25	Not rated		Not rated		Not rated	
8:							
Alnult	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
						Droughty	0.05
Reggad	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
9:							
Altapeak	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Droughty	0.90
						Gravel content	0.41
10:							
Altapeak	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.90
						Gravel content	0.41
11:							
Altapeak	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.90
						Gravel content	0.41
12:							
Altapeak	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Gravel content	0.41
13:							
Altapeak	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.90
						Gravel content	0.41
Alnult	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
						Droughty	0.05

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14:							
Altapeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Gravel content	0.41
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
						Droughty	0.05
15:							
Altapeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Gravel content	0.41
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
						Droughty	0.05
16:							
Anatone-------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Content of large stones	0.04	Content of large stones	0.04	Slope	1.00
						Droughty	1.00
						Content of large stones	1.00
Blewett-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.93
						Content of large stones	0.74
17:							
Anatone-------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Content of large stones	0.04	Content of large stones	0.04	Slope	1.00
						Droughty	1.00
						Content of large stones	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
18:							
Andic Cryochrepts---	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.77	Content of large stones	0.77	Content of large stones	1.00

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
19:							
Andic Cryumbrepts---	80	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Droughty Content of large stones Gravel content	 1.00 0.33 0.08 0.01
20:							
Andic Cryumbrepts---	75	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Droughty Depth to bedrock Content of large stones	 1.00 0.98 0.90 0.08
21:							
Andic Cryumbrepts---	30	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Droughty Depth to bedrock Content of large stones	 1.00 0.98 0.90 0.08
Haplocryods---------	30	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00 0.20
Rock outcrop--------	15	Not rated		Not rated		Not rated	
22:							
Andic Cryumbrepts---	55	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Droughty Depth to bedrock Content of large stones	 1.00 0.98 0.90 0.08
Rock outcrop--------	20	Not rated		Not rated		Not rated	
23:							
Andic Cryumbrepts---	50	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Droughty Depth to bedrock	 1.00 0.93 0.90
Rock outcrop--------	30	Not rated		Not rated		Not rated	
24:							
Andic Haplumbrepts--	45	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content Droughty Depth to bedrock Content of large stones	 1.00 0.92 0.73 0.54 0.08
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25:							
Angle	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.68	Too sandy	0.68	Droughty	0.34
						Content of large stones	0.01
26:							
Aquic Cryumprepts	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Too sandy	0.92	Too sandy	0.92	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40		
27:							
Ardening	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
28:							
Ardenmont	85	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
29:							
Ardenmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
30:							
Ardenmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
31:							
Ardenmont	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Swakane	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.92
						Gravel content	0.08
32:							
Ardenvoir	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.95
						Content of large stones	0.74
						Gravel content	0.35
33:							
Ardenvoir	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.95
						Content of large stones	0.74
						Gravel content	0.35

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
34:							
Azwell--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Droughty	0.92
						Depth to bedrock	0.80
						Content of large stones	0.20
						Gravel content	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
35:							
Bagmont-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Droughty	0.33
						Gravel content	0.16
						Content of large stones	0.03
						Depth to bedrock	0.01
36:							
Bigcreek------------	85	Not limited		Not limited		Somewhat limited	
						Gravel content	0.14
						Droughty	0.01
37:							
Billyridge----------	75	Not limited		Not limited		Somewhat limited	
						Content of large stones	0.20
						Gravel content	0.01
38:							
Billyridge----------	75	Not limited		Not limited		Somewhat limited	
						Slope	0.63
						Content of large stones	0.20
						Gravel content	0.01
39:							
Billyridge----------	75	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Content of large stones	0.20
						Gravel content	0.01
40:							
Bisping-------------	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.04
41:							
Bisping-------------	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.92				
42:							
Bisping-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43:							
Bjork	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.90
		Dusty	0.50	Dusty	0.50		
44:							
Bjork	55	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.46
		Dusty	0.50	Dusty	0.50	Content of large stones	0.01
Rock outcrop	30	Not rated		Not rated		Not rated	
45:							
Blag	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.25
Cle Elum	25	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.80
Rock outcrop	15	Not rated		Not rated		Not rated	
46:							
Blag	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.25
Rock outcrop	30	Not rated		Not rated		Not rated	
47:							
Blewett	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.93
						Content of large stones	0.74
Rock outcrop	20	Not rated		Not rated		Not rated	
48:							
Borland	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
49:							
Borland	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
49:							
Rock outcrop--------	20	Not rated		Not rated		Not rated	
50:							
Brief---------------	85	Not limited		Not limited		Somewhat limited	
						Droughty	0.46
						Gravel content	0.41
51:							
Brisky--------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.94
						Content of large stones	0.20
Rock outcrop--------	20	Not rated		Not rated		Not rated	
52:							
Burch---------------	85	Somewhat limited		Somewhat limited		Not limited	
		Dusty	0.50	Dusty	0.50		
53:							
Burnscreek----------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.54
						Droughty	0.32
54:							
Burrant-------------	85	Not limited		Not limited		Not limited	
55:							
Burrant-------------	80	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
56:							
Cashmont------------	80	Not limited		Not limited		Not limited	
57:							
Cashmont------------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Gravel content	0.22
						Content of large stones	0.01
58:							
Chapot--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.84	Content of large stones	0.84	Content of large stones	1.00

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
59:							
Chinkmin------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Depth to saturated zone	0.02
						Content of large stones	0.01
60:							
Chinkmin------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to saturated zone	0.02
						Content of large stones	0.01
61:							
Chinkmin------------	40	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Depth to saturated zone	0.02
						Content of large stones	0.01
Altapeak------------	30	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Droughty	1.00
						Gravel content	0.41
62:							
Chinkmin------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to saturated zone	0.02
						Content of large stones	0.01
Altapeak------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Gravel content	0.41
63:							
Chiwaukum-----------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.32
64:							
Chiwaukum-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.74
						Droughty	0.16

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
65:							
Chiwaukum-----------	75	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.74
66:							
Chiwaukum-----------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.32	Content of large stones	0.01	Slope	1.00
		Content of large stones	0.01			Content of large stones	0.99
						Droughty	0.34
67:							
Chiwaukum-----------	40	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.32
Chiwaukum, south----	35	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.74
68:							
Chiwaukum-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.32
Chiwaukum, south----	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.74
69:							
Chiwawa-------------	85	Not limited		Not limited		Somewhat limited	
						Gravel content	0.50
70:							
Choralmont, till substratum---------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.50
Choralmont----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.50
71:							
Choralmont----------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Gravel content	0.50
72:							
Choralmont----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.50

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73:							
Choralmont----------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Gravel content	0.50
74:							
Choralmont----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.50
75:							
Choralmont----------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.50
Limking-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.74
						Content of large stones	0.20
76:							
Chumstick-----------	75	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Depth to bedrock	1.00
						Droughty	1.00
						Slope	1.00
						Content of large stones	0.74
77:							
Chumstick-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.74
78:							
Chumstick-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.74
79:							
Cle Elum------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.06
80:							
Cle Elum------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.06
81:							
Coopmont------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Gravel content	0.18

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
82:							
Coopmont------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
83:							
Cowiche-------------	45	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.96
		Dusty	0.50	Dusty	0.50		
Cowiche, very deep--	40	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.96
		Dusty	0.50	Dusty	0.50		
84:							
Cowiche-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		
		Dusty	0.50	Dusty	0.50		
Cowiche, very deep--	30	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		
		Dusty	0.50	Dusty	0.50		
85:							
Cryomont------------	80	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Droughty	1.00
						Content of large stones	0.20
						Gravel content	0.09
86:							
Cryomont------------	75	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Droughty	1.00
						Slope	1.00
						Content of large stones	0.20
						Gravel content	0.09
87:							
Cryomont------------	40	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
		Content of large stones	0.01	Content of large stones	0.01	Droughty	1.00
						Content of large stones	0.99
						Gravel content	0.01
Cryomont, fan-------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.18	Content of large stones	0.01	Droughty	1.00
		Content of large stones	0.01			Slope	1.00
						Content of large stones	0.99
						Gravel content	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
88:							
Culving	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Depth to bedrock	0.99
						Droughty	0.48
						Content of large stones	0.11
						Gravel content	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
89:							
Culvop	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.89
						Content of large stones	0.38
90:							
Devore	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Droughty	1.00
						Content of large stones	0.99
						Depth to bedrock	0.84
						Gravel content	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
91:							
Dinkelman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
92:							
Dinkelman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
93:							
Dinkelman	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
Rock outcrop	25	Not rated		Not rated		Not rated	
94:							
Dinkels	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
95:							
Dinkels-------------	90	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.92				
96:							
Dinkels-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
97:							
Domkey--------------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Slope	1.00
98:							
Domkey--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
99:							
Domkey--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
McCree--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Droughty	0.83
						Gravel content	0.01
100:							
Dragoon-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.90
101:							
Dragoon-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.71
102:							
Entiat--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.22
						Content of large stones	0.01
103:							
Entiat--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.22
						Content of large stones	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
103:							
Rock outcrop--------	25	Not rated		Not rated		Not rated	
104:							
Entic Haplumbrepts--	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	1.00
						Droughty	1.00
105:							
Esmeralda-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
						Droughty	0.20
						Gravel content	0.11
106:							
Esmeralda-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
						Droughty	0.20
						Gravel content	0.11
Rock outcrop--------	35	Not rated		Not rated		Not rated	
107:							
Fears---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Droughty	0.28
108:							
Fears---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Droughty	0.28
Devore--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Droughty	1.00
						Content of large stones	0.99
						Depth to bedrock	0.84
						Gravel content	0.01
109:							
Fernow--------------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
110:							
Fernow--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
111:							
Fernow	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Serene	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
						Gravel content	0.02
112:							
Fluvaquents	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
113:							
Georgecreek	80	Not limited		Not limited		Somewhat limited	
						Slope	0.04
114:							
Georgecreek	80	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
115:							
Georgecreek	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
116:							
Georgecreek	50	Not limited		Not limited		Somewhat limited	
						Slope	0.04
Dragoon	30	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	0.90
						Slope	0.04
117:							
Georgecreek	40	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
Dragoon	40	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.92			Depth to bedrock	0.90
118:							
Gilpar	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Content of large stones	1.00
						Droughty	0.12
						Gravel content	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
119:							
Gilpar	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Content of large stones	1.00
						Droughty	0.12
						Gravel content	0.01
Nimue	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.26
120:							
Gilpar	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Content of large stones	1.00
						Droughty	0.12
						Gravel content	0.01
Nimue	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.14
Rock outcrop	20	Not rated		Not rated		Not rated	
121:							
Gilpar	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Content of large stones	1.00
						Droughty	0.12
						Gravel content	0.01
Rock outcrop	25	Not rated		Not rated		Not rated	
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.14
124:							
Goffpeak	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.14
Fears	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Droughty	0.28

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
125:							
Haplocryods, cold---	45	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.04	Depth to bedrock	0.84
						Droughty	0.67
Haplocryods, stony--	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.04	Slope	1.00
						Content of large stones	0.20
126:							
Haplocryods---------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.04	Droughty	0.03
Andic Cryochrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.77	Content of large stones	0.77	Content of large stones	1.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
127:							
Haploxerolls--------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.98			Slope	1.00
						Content of large stones	0.84
						Gravel content	0.81
						Droughty	0.01
128:							
Haploxerolls--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
						Gravel content	0.81
						Droughty	0.01
129:							
Humicryods----------	40	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.79	Too sandy	0.79	Slope	1.00
		Slope	0.08	Slope	0.08	Droughty	0.43
						Content of large stones	0.01
						Depth to bedrock	0.01
Andic Cryumbrepts---	35	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Droughty	0.75
						Content of large stones	0.08
						Gravel content	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
130:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.79	Too sandy	0.79	Droughty	0.43
						Content of large stones	0.08
						Depth to bedrock	0.01
Andic Cryochrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.77	Content of large stones	0.77	Content of large stones	1.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
131:							
Humicryods----------	40	Not rated		Not rated		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.79	Too sandy	0.79	Droughty	0.43
						Content of large stones	0.08
						Depth to bedrock	0.01
Andic Cryumbrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.14
Rock outcrop--------	15	Not rated		Not rated		Not rated	
132:							
Hyprairie-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.78		
133:							
Hyprairie-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Water erosion	1.00	Water erosion	1.00		
134:							
Hyprairie-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Water erosion	1.00	Water erosion	1.00		
Oldbutte------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
135:							
Icicle, south-------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.61
						Content of large stones	0.20
Icicle--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.92
						Droughty	0.61

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
136:							
Icicle	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.61
						Content of large stones	0.20
137:							
Icicle	80	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.92
						Droughty	0.61
138:							
Icicle	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.92
						Droughty	0.61
139:							
Icicle	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.56
						Content of large stones	0.20
140:							
Icicle	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.88	Content of large stones	0.88	Content of large stones	1.00
						Droughty	0.56
Chumstick	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.74
Rock outcrop	25	Not rated		Not rated		Not rated	
141:							
Icicle	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.88	Content of large stones	0.88	Content of large stones	1.00
						Droughty	0.56
Chumstick	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.74
Rock outcrop	25	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
142:							
Inkler	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.70
						Content of large stones	0.32
						Gravel content	0.01
143:							
Isella	40	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
Fernow	35	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
144:							
Isella	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fernow	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
145:							
Isella	40	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
Nimue	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.08	Content of large stones	0.02	Slope	1.00
		Content of large stones	0.02			Content of large stones	1.00
						Droughty	0.26
146:							
Isella	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Nimue	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.14
147:							
Kingmont	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.54
						Gravel content	0.04
148:							
Kladnick	85	Not limited		Not limited		Somewhat limited	
						Content of large stones	0.92
						Droughty	0.87

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
149:							
Kladnick------------	75	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Droughty	0.88
						Content of large stones	0.03
						Gravel content	0.02
150:							
Kladnick------------	80	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.08	Content of large stones	0.08	Content of large stones	1.00
						Droughty	1.00
						Gravel content	0.88
						Slope	0.04
151:							
Klapatche-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.50	Too sandy	0.50	Droughty	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Depth to bedrock	0.03
Altapeak------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.90
						Gravel content	0.41
152:							
Kloochman-----------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Depth to bedrock	0.16
						Gravel content	0.11
						Droughty	0.03
						Content of large stones	0.01
153:							
Kloochman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.16
						Gravel content	0.11
						Droughty	0.03
						Content of large stones	0.01
154:							
Kloochman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.16
						Gravel content	0.11
						Droughty	0.03
						Content of large stones	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
155:							
Kloochman-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.16
						Gravel content	0.11
						Droughty	0.03
						Content of large stones	0.01
Inkler--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.70
						Content of large stones	0.32
						Gravel content	0.01
156:							
Kloochman-----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Depth to bedrock	0.06
						Droughty	0.03
						Content of large stones	0.01
Inkler--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.70
						Content of large stones	0.32
						Gravel content	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
157:							
Kloochman-----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Depth to bedrock	0.06
						Droughty	0.03
						Content of large stones	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
158:							
Limking-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.31
						Content of large stones	0.20
159:							
Limking-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.31
						Content of large stones	0.20

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
159:							
Coopmont	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
160:							
Limking	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.31
						Content of large stones	0.20
Coopmont	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
161:							
Limking	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.31
						Content of large stones	0.20
Coopmont	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
Rock outcrop	20	Not rated		Not rated		Not rated	
162:							
Limking	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.31
						Content of large stones	0.20
Rock outcrop	20	Not rated		Not rated		Not rated	
163:							
Line	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Gravel content	1.00
						Slope	1.00
						Droughty	0.05
164:							
Line	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Gravel content	1.00
						Slope	1.00
165:							
Line	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.95
						Content of large stones	0.38
						Droughty	0.04

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
166:							
Line	40	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Gravel content	1.00
						Slope	1.00
Vabbing	35	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.11
						Gravel content	0.01
167:							
Loneridge	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.20
168:							
Loneridge	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.20
169:							
Loneridge	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
170:							
Macreeing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Droughty	0.55
171:							
Macreeing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Droughty	0.55
172:							
Macreeing	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Droughty	0.55
Rock outcrop	30	Not rated		Not rated		Not rated	
173:							
Mansonia	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
174:							
Mansonia------------	50	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.04	Slope	1.00
						Droughty	0.01
Swakane-------------	20	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.04	Depth to bedrock	1.00
						Droughty	1.00
						Slope	1.00
						Content of large stones	0.92
						Gravel content	0.08
Rock outcrop--------	20	Not rated		Not rated		Not rated	
175:							
Mansonia------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.01
Swakane-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.92
						Gravel content	0.08
Rock outcrop--------	30	Not rated		Not rated		Not rated	
176:							
Marmont-------------	85	Not limited		Not limited		Somewhat limited	
						Droughty	0.90
						Slope	0.04
177:							
Marmont-------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Droughty	0.90
178:							
Marmont-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.90
179:							
McCree--------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.32	Content of large stones	0.01	Slope	1.00
		Content of large stones	0.01			Content of large stones	0.95
						Droughty	0.83
						Gravel content	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
180:							
McCree	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Droughty	0.83
						Gravel content	0.01
181:							
McCree	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Droughty	0.83
						Gravel content	0.01
182:							
McCree	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Droughty	0.83
						Gravel content	0.01
Palmich	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
183:							
McCree	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Droughty	0.83
						Gravel content	0.01
Palmont	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.08
						Content of large stones	0.03
						Droughty	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
184:							
McCree	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Droughty	0.83
						Gravel content	0.01
Rock outcrop	25	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
185:							
Mippon	75	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Droughty	1.00
						Depth to saturated zone	0.75
						Flooding	0.60
						Gravel content	0.25
186:							
Mippon	75	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.57	Too sandy	0.57	Droughty	1.00
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Gravel content	0.98
						Depth to saturated zone	0.75
						Flooding	0.60
						Content of large stones	0.20
187:							
Mippon	75	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.60	Too sandy	0.60	Content of large stones	1.00
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Droughty	0.95
		Content of large stones	0.20	Content of large stones	0.20	Depth to saturated zone	0.75
						Flooding	0.60
						Gravel content	0.06
188:							
Morical	80	Not limited		Not limited		Somewhat limited	
						Slope	0.04
						Depth to bedrock	0.03
189:							
Morical	80	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Depth to bedrock	0.03
190:							
Morical	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.06
191:							
Morical	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
Dragoon	40	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.71
192:							
Morical	65	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Depth to bedrock	0.03

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
192:							
Dragoon	20	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08			Depth to bedrock	0.90
193:							
Morical	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Depth to bedrock	0.90
194:							
Morical	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Water erosion	1.00	Water erosion	1.00	Depth to bedrock	1.00
						Droughty	0.09
195:							
Mountaineer	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.10	Content of large stones	0.10	Droughty	1.00
						Content of large stones	1.00
						Depth to bedrock	0.01
196:							
Mountaineer	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.10	Content of large stones	0.10	Droughty	1.00
						Content of large stones	1.00
						Depth to bedrock	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
197:							
Mountaineer	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.10	Content of large stones	0.10	Droughty	1.00
						Content of large stones	1.00
						Depth to bedrock	0.01
Tillicum	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
198:							
Nahahum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
199:							
Nahahum	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Taneum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Content of large stones	0.03
200:							
Nard	75	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
201:							
Nard	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
202:							
Nard	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Blag	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.25
203:							
Nard	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Brisky	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.94
						Content of large stones	0.20
204:							
Nardine	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.62	Depth to saturated zone	0.62	Depth to saturated zone	0.83
205:							
Nardmont	75	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
206:							
Nardmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
207:							
Natapoc	80	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.05

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
208:							
Natapoc	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.05
209:							
Natapoc	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.05
Thow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.41
210:							
Naxing	75	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.61	Content of large stones	0.61	Content of large stones	1.00
		Dusty	0.50	Dusty	0.50	Slope	1.00
		Slope	0.18			Droughty	0.51
						Gravel content	0.01
211:							
Naxing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.61	Content of large stones	0.61	Content of large stones	1.00
		Dusty	0.50	Dusty	0.50	Droughty	0.51
						Gravel content	0.01
212:							
Newbell	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.26
213:							
Nimue	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.14
214:							
Nimue	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.26
215:							
Nimue	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.14

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
215:							
Rock outcrop--------	20	Not rated		Not rated		Not rated	
216:							
Nimue---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.26
Nimue, dry----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.14
217:							
Nimue, dry----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.14
Nimue---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Droughty	0.26
Rock outcrop--------	15	Not rated		Not rated		Not rated	
218:							
Oldbutte------------	85	Not limited		Not limited		Not limited	
219:							
Oldbutte------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
220:							
Palmich-------------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
221:							
Palmich-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
222:							
Palmich-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
223:							
Palmich	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
McCree	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Droughty	0.83
						Gravel content	0.01
224:							
Palmich	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
McCree	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Droughty	0.83
						Gravel content	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
225:							
Palmich	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.11
						Content of large stones	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
226:							
Palmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.33
						Gravel content	0.08
						Content of large stones	0.03
227:							
Palmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.33
						Gravel content	0.08
						Content of large stones	0.03

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
228:							
Palmont-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.35
						Content of large stones	0.32
						Gravel content	0.02
229:							
Palmont-------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.33
						Gravel content	0.08
						Content of large stones	0.03
Rock outcrop--------	30	Not rated		Not rated		Not rated	
230:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.59
						Content of large stones	0.11
231:							
Ramparter-----------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Slope	1.00
						Droughty	0.89
						Content of large stones	0.11
232:							
Ramparter-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.89
						Content of large stones	0.11
233:							
Ramparter-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.89
						Content of large stones	0.11
234:							
Ramparter-----------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Slope	1.00
						Droughty	0.61
235:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.61

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
236:							
Ramparter-----------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.59
						Content of large stones	0.11
Wilma---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.65
						Content of large stones	0.20
						Depth to bedrock	0.03
237:							
Reggad--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
238:							
Reggad--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
Serene--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
						Gravel content	0.02
239:							
Rock outcrop--------	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Blewett-------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.93
						Content of large stones	0.74
241:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Borland-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
242:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
242:							
Chumstick-----------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.74
Icicle--------------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.88	Content of large stones	0.88	Content of large stones	1.00
						Droughty	0.56
243:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.74
Icicle--------------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.88	Content of large stones	0.88	Content of large stones	1.00
						Droughty	0.56
244:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Rubble land---------	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop--------	35	Not rated		Not rated		Not rated	
Rubble land---------	25	Not rated		Not rated		Not rated	
Serene--------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
						Gravel content	0.02
246:							
Rubble land---------	65	Not rated		Not rated		Not rated	
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
247:							
Safety--------------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Droughty	0.94
						Depth to bedrock	0.90
						Content of large stones	0.01
248:							
Safety--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.94
						Depth to bedrock	0.90
						Content of large stones	0.01
249:							
Safety--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.94
						Depth to bedrock	0.90
						Content of large stones	0.01
250:							
Safety--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.94
						Depth to bedrock	0.90
						Content of large stones	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
251:							
Saska---------------	75	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Droughty	0.16
						Content of large stones	0.01
252:							
Saska---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.16
						Content of large stones	0.01
253:							
Saska---------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.03
254:							
Saska---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.03

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
255:							
Saska	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.68
						Droughty	0.15
256:							
Saska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Droughty	0.15
257:							
Saska	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.16
						Content of large stones	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
258:							
Saska	40	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Droughty	0.16
						Content of large stones	0.01
Saska, bouldery	35	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.68
						Droughty	0.15
259:							
Saska, south	40	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.03
Saska	35	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.68
						Droughty	0.15
260:							
Saska	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.16
						Content of large stones	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
260:							
Saska, bouldery-----	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Droughty	0.15
261:							
Saska---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.16
						Content of large stones	0.01
Saska, bouldery-----	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.68
						Droughty	0.15
Rock outcrop--------	15	Not rated		Not rated		Not rated	
262:							
Saska, south--------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.03
Saska---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.16
						Content of large stones	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
263:							
Saydab--------------	80	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Content of large stones	1.00
		Content of large stones	0.42	Content of large stones	0.42	Slope	1.00
		Slope	0.08			Gravel content	0.04
						Depth to bedrock	0.01
264:							
Scotties------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	0.11
						Content of large stones	0.01
265:							
Serene--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
						Gravel content	0.02

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
266:							
Serene	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	0.90
						Content of large stones	0.03
						Gravel content	0.02
Rock outcrop	25	Not rated		Not rated		Not rated	
267:							
Serpen	85	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Gravel content	1.00
						Content of large stones	0.11
						Droughty	0.04
268:							
Serpen	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
						Content of large stones	0.11
						Droughty	0.04
269:							
Shadypass	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
270:							
Shamel	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
271:							
Shamel	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
272:							
Shamel	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
273:							
Shaser	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Blewett	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.93
						Content of large stones	0.74

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
274:							
Shaser	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Brisky	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Gravel content	0.94
						Content of large stones	0.20
275:							
Shaser	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Chapot	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.25
276:							
Skipeak	80	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Slope	1.00
						Droughty	0.67
						Gravel content	0.41
277:							
Skipeak	40	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Slope	1.00
						Droughty	0.67
						Gravel content	0.41
Line	35	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Gravel content	1.00
						Slope	1.00
						Droughty	0.05
278:							
Soda	80	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Content of large stones	0.20
						Droughty	0.01
279:							
Soda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
						Droughty	0.08
280:							
Soda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.38
						Droughty	0.11

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
281:							
Soda	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.38
						Gravel content	0.01
282:							
Soda	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.38
						Gravel content	0.01
283:							
Soda	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.38
						Gravel content	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
284:							
Soda	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.38
						Droughty	0.11
Rock outcrop	20	Not rated		Not rated		Not rated	
285:							
Soda	40	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Content of large stones	0.20
						Droughty	0.01
Soda, cold	35	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Content of large stones	0.38
						Droughty	0.11
286:							
Soda	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
						Droughty	0.01
Soda, cold	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.38
						Droughty	0.11

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
287:							
Soda	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.38
						Droughty	0.11
Soda, cold	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.20
						Droughty	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
288:							
Sodacreek	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.78	Slope	1.00
		Depth to saturated zone	0.18	Depth to saturated zone	0.18	Depth to saturated zone	0.56
						Content of large stones	0.20
289:							
Sodacreek	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.18	Depth to saturated zone	0.18	Depth to saturated zone	0.56
						Content of large stones	0.20
Rock outcrop	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08				
Saska	30	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Droughty	0.16
						Content of large stones	0.01
291:							
Spodic Vitrixerands	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Water erosion	1.00	Depth to saturated zone	1.00
		Water erosion	1.00	Slope	1.00		
Saska	35	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Droughty	0.16
						Content of large stones	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
292:							
Stemilt	80	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.11
293:							
Stemilt	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.11
294:							
Surgh	80	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.08			Content of large stones	0.01
295:							
Surgh	80	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Content of large stones	0.01
296:							
Surgh	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Water erosion	1.00	Water erosion	1.00	Content of large stones	0.01
297:							
Surgh	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.32	Content of large stones	0.14	Content of large stones	1.00
		Content of large stones	0.14			Slope	1.00
						Gravel content	0.06
Wedge	40	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Gravel content	0.18
						Droughty	0.17
298:							
Swakane	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.92
						Gravel content	0.08
299:							
Swakane	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.92
						Gravel content	0.08

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
300:							
Swakane-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.92
						Gravel content	0.08
Rock outcrop--------	25	Not rated		Not rated		Not rated	
301:							
Swakane-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.92
						Gravel content	0.08
Rock outcrop--------	35	Not rated		Not rated		Not rated	
302:							
Switchback----------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Depth to bedrock	0.80
						Droughty	0.33
						Content of large stones	0.08
						Gravel content	0.01
303:							
Switchback----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.80
						Droughty	0.33
						Content of large stones	0.08
						Gravel content	0.01
304:							
Switchback----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.80
						Droughty	0.33
						Content of large stones	0.08
						Gravel content	0.01
305:							
Taneum--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00	Content of large stones	0.03
306:							
Thow----------------	80	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Gravel content	0.41

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
307:							
Thow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.41
308:							
Thow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.41
309:							
Thow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.41
Domkey	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
310:							
Thowson	85	Not limited		Not limited		Not limited	
311:							
Thowson	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63
312:							
Thowson	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.92				
313:							
Thowson	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		
314:							
Thowson	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.01
315:							
Thowson	60	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Content of large stones	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
316:							
Thowson	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
317:							
Thowson	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.01
Rock outcrop	30	Not rated		Not rated		Not rated	
318:							
Thowson, stony	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.01
Thowson	30	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		
Rock outcrop	15	Not rated		Not rated		Not rated	
319:							
Tillicum	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
320:							
Tillicum	85	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
321:							
Tillicum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
322:							
Tillmont	75	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Gravel content	0.50
323:							
Tillmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.50
324:							
Tillmont	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.50
Inkler	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.70
						Content of large stones	0.32
						Gravel content	0.01

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
325:							
Tiptop	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	0.94
						Content of large stones	0.20
326:							
Tiptop	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	0.94
						Content of large stones	0.20
Naxing	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.61	Content of large stones	0.61	Content of large stones	1.00
		Dusty	0.50	Dusty	0.50	Droughty	0.51
						Gravel content	0.01
327:							
Totem	85	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Slope	1.00
328:							
Totem	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
329:							
Totem	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
330:							
Totem	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Chiwaukum	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.74
						Droughty	0.16
331:							
Treen	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	0.97
332:							
Treen	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	0.97

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
332:							
Klapatche	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.42	Too sandy	0.42	Droughty	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.95
						Depth to bedrock	0.03
333:							
Tronsen	80	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Content of large stones	0.84
334:							
Tronsen	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
335:							
Tyee	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Too sandy	0.45	Too sandy	0.45	Slope	1.00
						Droughty	1.00
						Too sandy	0.50
						Gravel content	0.36
336:							
Tyee	85	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Depth to bedrock	1.00
						Slope	1.00
						Droughty	0.90
						Gravel content	0.36
						Content of large stones	0.01
337:							
Tyee	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	0.90
						Gravel content	0.36
						Content of large stones	0.01
338:							
Tyee	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	0.90
						Gravel content	0.36
						Content of large stones	0.01
Bisping	30	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
339:							
Typic Cryaquands	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Gravel content	0.01
340:							
Vabbing	80	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.11
						Gravel content	0.01
341:							
Vabbing	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.11
						Gravel content	0.01
342:							
Vabbing	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.11
						Gravel content	0.01
Gilpar	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Content of large stones	1.00
						Droughty	0.12
						Gravel content	0.01
343:							
Vabbing	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.11
						Gravel content	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
344:							
Vabus	75	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	1.00
		Slope	0.08			Droughty	0.91
						Depth to saturated zone	0.75
						Gravel content	0.25
345:							
Vabus	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Droughty	0.91
						Depth to saturated zone	0.75
						Gravel content	0.25

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
346:							
Vabus	40	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	1.00
		Slope	0.08			Droughty	0.91
						Depth to saturated zone	0.75
						Gravel content	0.25
Chinkmin	35	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Depth to saturated zone	0.02
						Content of large stones	0.01
347:							
Vabus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Droughty	0.91
						Depth to saturated zone	0.75
						Gravel content	0.25
Chinkmin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to saturated zone	0.02
						Content of large stones	0.01
348:							
Varelum	85	Not limited		Not limited		Not limited	
349:							
Varelum	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63
350:							
Varelum	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.92				
351:							
Varelum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		
352:							
Vitricryands	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.80
353:							
Vitricryands	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.80
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
354:							
Wagberg	80	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Slope	1.00
						Content of large stones	0.38
						Gravel content	0.13
355:							
Wagberg	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.38
						Gravel content	0.13
356:							
Wagberg	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.38
						Gravel content	0.13
Wagberg, south	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Gravel content	0.01
357:							
Wagberg	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.38
						Gravel content	0.13
Swakane	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
						Slope	1.00
						Droughty	1.00
						Content of large stones	0.92
						Gravel content	0.08
Rock outcrop	20	Not rated		Not rated		Not rated	
358:							
Wedge	80	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Gravel content	0.18
						Droughty	0.17
359:							
Wedge	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
						Droughty	0.17

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
360:							
Wedge	80	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Droughty	0.50
						Gravel content	0.18
361:							
Wedge	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.50
						Gravel content	0.18
362:							
Wedge	60	Not limited		Not limited		Somewhat limited	
						Droughty	0.50
						Gravel content	0.18
Typic Cryaquands	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Gravel content	0.01
363:							
Wedge	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.18
						Droughty	0.17
Wedge, cold	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.50
						Gravel content	0.18
364:							
Wedgemont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
						Droughty	0.06
365:							
Wilma	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.65
						Content of large stones	0.20
						Depth to bedrock	0.03
366:							
Wilma	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.65
						Content of large stones	0.20
						Depth to bedrock	0.03
Rock outcrop	15	Not rated		Not rated		Not rated	

Table 9b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
367:							
Yaxing	80	Not limited		Not limited		Somewhat limited	
						Slope	0.63
368:							
Yaxing	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
369:							
Yaxon	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63
370:							
Yaxon	85	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.92				
371:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.96		
372:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Water erosion	1.00	Water erosion	1.00		
373:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Water erosion	1.00	Water erosion	1.00		
374:							
Zeb	75	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.54
						Droughty	0.26
W:							
Water	100	Not rated		Not rated		Not rated	

Table 10a.--Building Site Development (Part I)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
2:							
Almac	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
3:							
Almac	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
4:							
Almac	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
5:							
Almac	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Azwell	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.79	Depth to hard bedrock	1.00	Depth to hard bedrock	0.79
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	0.14
6:							
Almac	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Azwell	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.79	Depth to hard bedrock	1.00	Depth to hard bedrock	0.79
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	0.14
Rock outcrop	15	Not rated		Not rated		Not rated	
7:							
Almac	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
8:							
Alnult	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8:							
Reggad--------------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
9:							
Altapeak------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
10:							
Altapeak------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
11:							
Altapeak------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
12:							
Altapeak------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
13:							
Altapeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
14:							
Altapeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
15:							
Altapeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
16:							
Anatone-------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.74	Content of large stones	0.74	Content of large stones	0.74

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
16:							
Blewett-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
17:							
Anatone-------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.74	Content of large stones	0.74	Content of large stones	0.74
Rock outcrop--------	15	Not rated		Not rated		Not rated	
18:							
Andic Cryochrepts---	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.16	Content of large stones	0.16	Content of large stones	0.16
19:							
Andic Cryumbrepts---	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
20:							
Andic Cryumbrepts---	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to hard bedrock	0.90
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
21:							
Andic Cryumbrepts---	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to hard bedrock	0.90
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Haplocryods---------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
22:							
Andic Cryumbrepts---	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to hard bedrock	0.90
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23:							
Andic Cryumbrepts---	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to hard bedrock	0.90
Rock outcrop--------	30	Not rated		Not rated		Not rated	
24:							
Andic Haplumbrepts--	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.54	Depth to hard bedrock	1.00	Depth to hard bedrock	0.54
Rock outcrop--------	30	Not rated		Not rated		Not rated	
25:							
Angle---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
26:							
Aquic Cryumprepts---	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
27:							
Ardening------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
28:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
29:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
30:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
31:							
Ardenmont-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Swakane-------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
32:							
Ardenvoir-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.05		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
33:							
Ardenvoir-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.05		
34:							
Azwell--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.79	Depth to hard bedrock	1.00	Depth to hard bedrock	0.79
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	0.14
Rock outcrop--------	15	Not rated		Not rated		Not rated	
35:							
Bagmont-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
36:							
Bigcreek------------	85	Not limited		Not limited		Not limited	
37:							
Billyridge----------	75	Not limited		Not limited		Not limited	
38:							
Billyridge----------	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
39:							
Billyridge----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
40:							
Bisping-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
41:							
Bisping-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
42:							
Bisping-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
43:							
Bjork---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.90	Shrink-swell	0.50
				Shrink-swell	0.50		
44:							
Bjork---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.46		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44:							
Rock outcrop	30	Not rated		Not rated		Not rated	
45:							
Blag	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Cle Elum	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.79	Shrink-swell	0.50
				Shrink-swell	0.50		
Rock outcrop	15	Not rated		Not rated		Not rated	
46:							
Blag	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
47:							
Blewett	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
48:							
Borland	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
49:							
Borland	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	
50:							
Brief	85	Not limited		Not limited		Very limited	
						Slope	1.00
51:							
Brisky	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
51:							
Rock outcrop	20	Not rated		Not rated		Not rated	
52:							
Burch	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
53:							
Burnscreek	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.23	Content of large stones	0.23	Content of large stones	0.23
54:							
Burrant	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
55:							
Burrant	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
56:							
Cashmont	80	Not limited		Not limited		Not limited	
57:							
Cashmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
58:							
Chapot	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
59:							
Chinkmin	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.03	Slope	1.00	Depth to saturated zone	0.03
60:							
Chinkmin	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.03	Depth to saturated zone	1.00	Depth to saturated zone	0.03
61:							
Chinkmin	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.03	Slope	1.00	Depth to saturated zone	0.03
Altapeak	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
62:							
Chinkmin	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.03	Depth to saturated zone	1.00	Depth to saturated zone	0.03
Altapeak	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
63:							
Chiwaukum	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
64:							
Chiwaukum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	0.14
65:							
Chiwaukum	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
66:							
Chiwaukum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.24	Content of large stones	0.24	Content of large stones	0.24
67:							
Chiwaukum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Chiwaukum, south	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
68:							
Chiwaukum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Chiwaukum, south	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
69:							
Chiwawa	85	Not limited		Not limited		Not limited	
70:							
Choralmont, till substratum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Choralmont	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
71:							
Choralmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
72:							
Choralmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73:							
Choralmont----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
74:							
Choralmont----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
75:							
Choralmont----------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Limking-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Depth to hard bedrock	0.42	Content of large stones	0.03
				Content of large stones	0.03		
76:							
Chumstick-----------	75	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.07
77:							
Chumstick-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.07
78:							
Chumstick-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.07
79:							
Cle Elum------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.06		
80:							
Cle Elum------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.06		
81:							
Coopmont------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
82:							
Coopmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
83:							
Cowiche	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Cowiche, very deep	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
				Shrink-swell	0.50		
84:							
Cowiche	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Cowiche, very deep	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Shrink-swell	0.50		
85:							
Cryomont	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Content of large stones	0.25	Content of large stones	0.25	Content of large stones	0.25
86:							
Cryomont	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.29	Content of large stones	0.29	Content of large stones	0.29
87:							
Cryomont	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Content of large stones	0.38	Content of large stones	0.38	Content of large stones	0.38
Cryomont, fan	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.39	Content of large stones	0.39	Content of large stones	0.39
88:							
Culving	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.99	Depth to hard bedrock	1.00	Depth to hard bedrock	0.99
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89:							
Culvop	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
90:							
Devore	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.93	Depth to hard bedrock	1.00	Content of large stones	0.93
		Depth to hard bedrock	0.84	Content of large stones	0.93	Depth to hard bedrock	0.84
Rock outcrop	15	Not rated		Not rated		Not rated	
91:							
Dinkelman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
92:							
Dinkelman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
93:							
Dinkelman	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
94:							
Dinkels	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
95:							
Dinkels	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
96:							
Dinkels	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
97:							
Domkey	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
98:							
Domkey	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
99:							
Domkey	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
McCree	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.89
				Depth to hard bedrock	0.05		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100:							
Dragoon-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.90	Shrink-swell	0.50
				Shrink-swell	0.50		
101:							
Dragoon-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.71	Shrink-swell	0.50
				Shrink-swell	0.50		
102:							
Entiat--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
103:							
Entiat--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Rock outcrop--------	25	Not rated		Not rated		Not rated	
104:							
Entic Haplumbrepts--	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
				Depth to hard bedrock	1.00		
105:							
Esmeralda-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.73	Content of large stones	0.73	Content of large stones	0.73
106:							
Esmeralda-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.73	Content of large stones	0.73	Content of large stones	0.73
Rock outcrop--------	35	Not rated		Not rated		Not rated	
107:							
Fears---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.25	Content of large stones	0.25	Content of large stones	0.25

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
108:							
Fears	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.25	Content of large stones	0.25	Content of large stones	0.25
Devore	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.93	Depth to hard bedrock	1.00	Content of large stones	0.93
		Depth to hard bedrock	0.84	Content of large stones	0.93	Depth to hard bedrock	0.84
109:							
Fernow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
110:							
Fernow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
111:							
Fernow	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Serene	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Depth to soft bedrock	0.90	Content of large stones	0.01
				Content of large stones	0.01		
112:							
Fluvaquents	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
113:							
Georgecreek	80	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
114:							
Georgecreek	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
115:							
Georgecreek	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
116:							
Georgecreek	50	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116:							
Dragoon	30	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Depth to soft bedrock	0.90	Slope	1.00
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
117:							
Georgecreek	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Dragoon	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.90	Shrink-swell	0.50
				Shrink-swell	0.50		
118:							
Gilpar	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
119:							
Gilpar	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Nimue	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	0.53	Content of large stones	0.53
120:							
Gilpar	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Nimue	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	0.60
Rock outcrop	20	Not rated		Not rated		Not rated	
121:							
Gilpar	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Rock outcrop	25	Not rated		Not rated		Not rated	

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.96		
124:							
Goffpeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.96		
Fears---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.25	Content of large stones	0.25	Content of large stones	0.25
125:							
Haplocryods, cold---	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.84	Slope	1.00	Depth to hard bedrock	0.84
Haplocryods, stony--	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
126:							
Haplocryods---------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.26		
Andic Cryochrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.16	Content of large stones	0.16	Content of large stones	0.16
Rock outcrop--------	20	Not rated		Not rated		Not rated	
127:							
Haploxerolls--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
128:							
Haploxerolls--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
129:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17	Content of large stones	0.17	Content of large stones	0.17
				Depth to soft bedrock	0.01		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
129:							
Andic Cryumbrepts---	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
130:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17	Content of large stones	0.17	Content of large stones	0.17
				Depth to soft bedrock	0.01		
Andic Cryochrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.16	Content of large stones	0.16	Content of large stones	0.16
Rock outcrop--------	20	Not rated		Not rated		Not rated	
131:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17	Content of large stones	0.17	Content of large stones	0.17
				Depth to soft bedrock	0.01		
Andic Cryumbrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.32		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
132:							
Hyprairie-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
133:							
Hyprairie-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
134:							
Hyprairie-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Oldbutte------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
135:							
Icicle, south-------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.88	Content of large stones	0.88	Content of large stones	0.88

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
135:							
Icicle--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.96	Content of large stones	0.96	Content of large stones	0.96
136:							
Icicle--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.88	Content of large stones	0.88	Content of large stones	0.88
137:							
Icicle--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.96	Content of large stones	0.96	Content of large stones	0.96
138:							
Icicle--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.96	Content of large stones	0.96	Content of large stones	0.96
139:							
Icicle--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79	Content of large stones	0.79	Content of large stones	0.79
140:							
Icicle--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
				Depth to hard bedrock	0.42		
Chumstick-----------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.07
Rock outcrop--------	25	Not rated		Not rated		Not rated	
141:							
Icicle--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
				Depth to hard bedrock	0.42		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
141:							
Chumstick-----------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.07
Rock outcrop--------	25	Not rated		Not rated		Not rated	
142:							
Inkler--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.88		
143:							
Isella--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fernow--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
144:							
Isella--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fernow--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
145:							
Isella--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Nimue---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	0.53	Content of large stones	0.53
146:							
Isella--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Nimue---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	0.60
147:							
Kingmont------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Shrink-swell	0.50		
148:							
Kladnick------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Content of large stones	0.32	Content of large stones	0.32	Content of large stones	0.32

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
149:							
Kladnick	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
150:							
Kladnick	80	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.85	Content of large stones	0.85	Slope	1.00
		Slope	0.04	Slope	0.04	Content of large stones	0.85
151:							
Klapatche	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Depth to soft bedrock	0.03	Content of large stones	0.01
				Content of large stones	0.01		
Altapeak	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
152:							
Kloochman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.15	Slope	1.00	Depth to hard bedrock	0.15
153:							
Kloochman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.15	Depth to hard bedrock	1.00	Depth to hard bedrock	0.15
154:							
Kloochman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.15	Depth to hard bedrock	1.00	Depth to hard bedrock	0.15
155:							
Kloochman	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.15	Depth to hard bedrock	1.00	Depth to hard bedrock	0.15
Inkler	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.88		
156:							
Kloochman	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
Inkler	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.88		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
156:							
Rock outcrop	15	Not rated		Not rated		Not rated	
157:							
Kloochman	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.06	Depth to hard bedrock	1.00	Depth to hard bedrock	0.06
Rock outcrop	15	Not rated		Not rated		Not rated	
158:							
Limking	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.01		
159:							
Limking	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.01		
Coopmont	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
160:							
Limking	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.01		
Coopmont	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
161:							
Limking	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.01		
Coopmont	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
162:							
Limking	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.01		
Rock outcrop	20	Not rated		Not rated		Not rated	
163:							
Line	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
164:							
Line	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
165:							
Line	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
166:							
Line	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Vabbing	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
167:							
Loneridge	85	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.13	Content of large stones	0.13	Content of large stones	0.13
168:							
Loneridge	85	Very limited		Very limited		Very limited	
		Slope	1.00	Shrink-swell	1.00	Slope	1.00
		Content of large stones	0.04	Slope	1.00	Content of large stones	0.04
				Content of large stones	0.04		
169:							
Loneridge	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Content of large stones	0.26	Content of large stones	0.26	Content of large stones	0.26
170:							
Macreeing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.33	Depth to hard bedrock	0.61	Content of large stones	0.33
				Content of large stones	0.33		
171:							
Macreeing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.33	Depth to hard bedrock	0.61	Content of large stones	0.33
				Content of large stones	0.33		
172:							
Macreeing	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.33	Depth to hard bedrock	0.61	Content of large stones	0.33
				Content of large stones	0.33		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
172:							
Rock outcrop	30	Not rated		Not rated		Not rated	
173:							
Mansonia	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
174:							
Mansonia	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.42		
Swakane	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
175:							
Mansonia	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.42		
Swakane	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Rock outcrop	30	Not rated		Not rated		Not rated	
176:							
Marmont	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
177:							
Marmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
178:							
Marmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
179:							
McCree	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.89
				Depth to hard bedrock	0.05		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
180:							
McCree--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.89
				Depth to hard bedrock	0.05		
181:							
McCree--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.89
				Depth to hard bedrock	0.05		
182:							
McCree--------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.89
				Depth to hard bedrock	0.05		
Palmich-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
183:							
McCree--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.89
				Depth to hard bedrock	0.05		
Palmont-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
184:							
McCree--------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.89
				Depth to hard bedrock	0.05		
Rock outcrop--------	25	Not rated		Not rated		Not rated	
185:							
Mippon--------------	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
186:							
Mippon--------------	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Content of large stones	0.05	Content of large stones	0.05	Content of large stones	0.05
187:							
Mippon--------------	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	0.42
188:							
Morical-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.04	Slope	0.04	Shrink-swell	0.50
				Depth to soft bedrock	0.03		
189:							
Morical-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.03		
190:							
Morical-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.06		
191:							
Morical-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.03		
Dragoon-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.71	Shrink-swell	0.50
				Shrink-swell	0.50		
192:							
Morical-------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.03		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
192:							
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.90	Shrink-swell	0.50
				Shrink-swell	0.50		
193:							
Morical	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.03		
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.90	Shrink-swell	0.50
				Shrink-swell	0.50		
194:							
Morical	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to soft bedrock	0.03		
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	1.00	Shrink-swell	0.50
				Shrink-swell	0.50		
195:							
Mountaineer	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Depth to hard bedrock	1.00	Content of large stones	1.00
		Depth to hard bedrock	0.01	Content of large stones	1.00	Depth to hard bedrock	0.01
196:							
Mountaineer	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Depth to hard bedrock	1.00	Content of large stones	1.00
		Depth to hard bedrock	0.01	Content of large stones	1.00	Depth to hard bedrock	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
197:							
Mountaineer	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Depth to hard bedrock	1.00	Content of large stones	1.00
		Depth to hard bedrock	0.01	Content of large stones	1.00	Depth to hard bedrock	0.01

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
197:							
Tillicum------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.96		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
198:							
Nahahum-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
199:							
Nahahum-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Taneum--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to hard bedrock	0.01		
200:							
Nard----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
201:							
Nard----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
202:							
Nard----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Blag----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
203:							
Nard----------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Brisky--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
204:							
Nardine-------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
205:							
Nardmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
206:							
Nardmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
207:							
Natapoc	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.34	Content of large stones	0.34	Content of large stones	0.34
208:							
Natapoc	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.34	Content of large stones	0.34	Content of large stones	0.34
209:							
Natapoc	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.34	Content of large stones	0.34	Content of large stones	0.34
Thow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
210:							
Naxing	75	Very limited		Very limited		Very limited	
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
211:							
Naxing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
212:							
Newbell	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
213:							
Nimue	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	0.60
214:							
Nimue	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	0.53	Content of large stones	0.53

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
215:							
Nimue	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	0.60
Rock outcrop	20	Not rated		Not rated		Not rated	
216:							
Nimue	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	0.53	Content of large stones	0.53
Nimue, dry	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	0.60
217:							
Nimue, dry	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	0.60
Nimue	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	0.53	Content of large stones	0.53
Rock outcrop	15	Not rated		Not rated		Not rated	
218:							
Oldbutte	85	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Slope	0.50
						Shrink-swell	0.50
219:							
Oldbutte	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
220:							
Palmich	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
221:							
Palmich	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
222:							
Palmich	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
223:							
Palmich	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
223:							
McCree	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.89
				Depth to hard bedrock	0.05		
224:							
Palmich	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
McCree	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.89
				Depth to hard bedrock	0.05		
Rock outcrop	20	Not rated		Not rated		Not rated	
225:							
Palmich	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
226:							
Palmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
227:							
Palmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
228:							
Palmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
229:							
Palmont	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
230:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
231:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
232:							
Ramparter	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
233:							
Ramparter	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
234:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
235:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
236:							
Ramparter	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Wilma	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.03	Depth to hard bedrock	1.00	Depth to hard bedrock	0.03
237:							
Reggad	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
238:							
Reggad	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
Serene	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Depth to soft bedrock	0.90	Content of large stones	0.01
				Content of large stones	0.01		
239:							
Rock outcrop	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Blewett	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
241:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Borland	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
242:							
Rock outcrop	40	Not rated		Not rated		Not rated	

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
242:							
Chumstick-----------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.07
Icicle--------------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
				Depth to hard bedrock	0.42		
243:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.07
Icicle--------------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
				Depth to hard bedrock	0.42		
244:							
Rock outcrop--------	60	Not rated		Not rated		Not rated	
Rubble land---------	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop--------	35	Not rated		Not rated		Not rated	
Rubble land---------	25	Not rated		Not rated		Not rated	
Serene--------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Depth to soft bedrock	0.90	Content of large stones	0.01
				Content of large stones	0.01		
246:							
Rubble land---------	65	Not rated		Not rated		Not rated	
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
247:							
Safety	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.90		
248:							
Safety	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.90		
249:							
Safety	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.90		
250:							
Safety	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.90		
Rock outcrop	15	Not rated		Not rated		Not rated	
251:							
Saska	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Content of large stones	0.45	Content of large stones	0.45
252:							
Saska	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Content of large stones	0.45	Content of large stones	0.45
253:							
Saska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
254:							
Saska	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
255:							
Saska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	0.42
256:							
Saska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	0.42

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
257:							
Saska	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Content of large stones	0.45	Content of large stones	0.45
Rock outcrop	20	Not rated		Not rated		Not rated	
258:							
Saska	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Content of large stones	0.45	Content of large stones	0.45
Saska, bouldery	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	0.42
259:							
Saska, south	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Saska	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	0.42
260:							
Saska	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Content of large stones	0.45	Content of large stones	0.45
Saska, bouldery	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	0.42
261:							
Saska	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Content of large stones	0.45	Content of large stones	0.45
Saska, bouldery	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	0.42
Rock outcrop	15	Not rated		Not rated		Not rated	
262:							
Saska, south	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
262:							
Saska	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Content of large stones	0.45	Content of large stones	0.45
Rock outcrop	15	Not rated		Not rated		Not rated	
263:							
Saydab	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Content of large stones	0.87	Slope	1.00	Content of large stones	0.87
		Depth to hard bedrock	0.01	Content of large stones	0.87	Depth to hard bedrock	0.01
264:							
Scotties	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.88		
265:							
Serene	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Depth to soft bedrock	0.90	Content of large stones	0.01
				Content of large stones	0.01		
266:							
Serene	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Depth to soft bedrock	0.90	Content of large stones	0.01
				Content of large stones	0.01		
Rock outcrop	25	Not rated		Not rated		Not rated	
267:							
Serpen	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	0.61	Shrink-swell	0.50
				Shrink-swell	0.50		
268:							
Serpen	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	0.61	Shrink-swell	0.50
				Shrink-swell	0.50		
269:							
Shadypass	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
270:							
Shamel	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
271:							
Shamel	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
272:							
Shamel	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
273:							
Shaser	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Blewett	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
274:							
Shaser	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Brisky	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
275:							
Shaser	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Chapot	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
276:							
Skipeak	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
277:							
Skipeak	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Line	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
278:							
Soda	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
279:							
Soda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.19	Content of large stones	0.19	Content of large stones	0.19
280:							
Soda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	0.18
281:							
Soda	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
282:							
Soda	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
283:							
Soda	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
284:							
Soda	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	0.18
Rock outcrop	20	Not rated		Not rated		Not rated	
285:							
Soda	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03
Soda, cold	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	0.18
286:							
Soda	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
286:							
Soda, cold	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	0.18
287:							
Soda	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	0.18
Soda, cold	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03
Rock outcrop	15	Not rated		Not rated		Not rated	
288:							
Sodacreek	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.88	Depth to saturated zone	1.00	Depth to saturated zone	0.88
289:							
Sodacreek	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.88	Depth to saturated zone	1.00	Depth to saturated zone	0.88
Rock outcrop	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Saska	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Content of large stones	0.45	Content of large stones	0.45
291:							
Spodic Vitrixerands	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Saska	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Content of large stones	0.45	Content of large stones	0.45

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
292:							
Stemilt	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85	Content of large stones	0.85	Content of large stones	0.85
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
293:							
Stemilt	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85	Content of large stones	0.85	Content of large stones	0.85
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
294:							
Surgh	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.77		
295:							
Surgh	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.77		
296:							
Surgh	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.77		
297:							
Surgh	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.77	Content of large stones	0.77	Content of large stones	0.77
Wedge	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
298:							
Swakane	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
299:							
Swakane	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
300:							
Swakane	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Rock outcrop	25	Not rated		Not rated		Not rated	
301:							
Swakane	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Rock outcrop	35	Not rated		Not rated		Not rated	
302:							
Switchback	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.79		
303:							
Switchback	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.79		
304:							
Switchback	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.79		
305:							
Taneum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to hard bedrock	0.01		
306:							
Thow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
307:							
Thow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
308:							
Thow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
309:							
Thow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Domkey	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
310:							
Thowson	85	Not limited		Not limited		Not limited	
311:							
Thowson	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
312:							
Thowson	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
313:							
Thowson	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
314:							
Thowson	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
315:							
Thowson	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
316:							
Thowson	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
317:							
Thowson	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
318:							
Thowson, stony	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Thowson	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
319:							
Tillicum	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	1.00		
320:							
Tillicum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.96		
321:							
Tillicum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.96		
322:							
Tillmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.77		
323:							
Tillmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.77		
324:							
Tillmont	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.77		
Inkler	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.88		
325:							
Tiptop	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	0.14
326:							
Tiptop	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	0.14
Naxing	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
327:							
Totem---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
328:							
Totem---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
329:							
Totem---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
330:							
Totem---------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Chiwaukum-----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	0.14
331:							
Treen---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
332:							
Treen---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Klapatche-----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Depth to soft bedrock	0.03	Content of large stones	0.01
				Content of large stones	0.01		
333:							
Tronsen-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Shrink-swell	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	1.00	Shrink-swell	0.50
334:							
Tronsen-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	1.00	Shrink-swell	0.50
335:							
Tyee----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
336:							
Tyee----------------	85	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
337:							
Tyee----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
338:							
Tyee----------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
Bisping-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
339:							
Typic Cryaquands----	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
340:							
Vabbing-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
341:							
Vabbing-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
342:							
Vabbing-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Gilpar--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
343:							
Vabbing-------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
344:							
Vabus---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.98	Slope	1.00	Depth to saturated zone	0.98
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
345:							
Vabus	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
346:							
Vabus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.98	Slope	1.00	Depth to saturated zone	0.98
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Chinkmin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.03	Slope	1.00	Depth to saturated zone	0.03
347:							
Vabus	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Chinkmin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.03	Depth to saturated zone	1.00	Depth to saturated zone	0.03
348:							
Varelum	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.50
						Shrink-swell	0.50
349:							
Varelum	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
350:							
Varelum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
351:							
Varelum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
352:							
Vitricryands	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.79		

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
353:							
Vitricryands--------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.79		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
354:							
Wagberg-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	0.02
355:							
Wagberg-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	0.02
356:							
Wagberg-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Wagberg, south------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.05	Content of large stones	0.05	Content of large stones	0.05
357:							
Wagberg-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	0.02
Swakane-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Rock outcrop--------	20	Not rated		Not rated		Not rated	
358:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
359:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
360:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
361:							
Wedge	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
362:							
Wedge	60	Not limited		Not limited		Very limited	
						Slope	1.00
Typic Cryaquands	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Slope	1.00
363:							
Wedge	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Wedge, cold	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
364:							
Wedgemont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
365:							
Wilma	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.03	Depth to hard bedrock	1.00	Depth to hard bedrock	0.03
366:							
Wilma	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.03	Depth to hard bedrock	1.00	Depth to hard bedrock	0.03
Rock outcrop	15	Not rated		Not rated		Not rated	
367:							
Yaxing	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
368:							
Yaxing	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
369:							
Yaxon	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
370:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 10a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
371:							
Yaxon---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
372:							
Yaxon---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
373:							
Yaxon---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
374:							
Zeb-----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents	75	Very limited Frost action Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	 1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	 1.00 0.60
2:							
Almac	85	Very limited Frost action Slope	 1.00 1.00	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
3:							
Almac	80	Very limited Slope Frost action	 1.00 1.00	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	 1.00
4:							
Almac	80	Very limited Slope Frost action	 1.00 1.00	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	 1.00
5:							
Almac	40	Very limited Slope Frost action	 1.00 1.00	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	 1.00
Azwell	30	Very limited Slope Depth to hard bedrock Frost action Content of large stones	 1.00 0.79 0.50 0.14	Very limited Depth to hard bedrock Slope Content of large stones Cutbanks cave	 1.00 1.00 0.14 0.10	Very limited Slope Droughty Depth to bedrock Content of large stones Gravel content	 1.00 0.92 0.80 0.20 0.01
6:							
Almac	35	Very limited Slope Frost action	 1.00 1.00	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	 1.00
Azwell	25	Very limited Slope Depth to hard bedrock Frost action Content of large stones	 1.00 0.79 0.50 0.14	Very limited Depth to hard bedrock Slope Content of large stones Cutbanks cave	 1.00 1.00 0.14 0.10	Very limited Slope Droughty Depth to bedrock Content of large stones Gravel content	 1.00 0.92 0.80 0.20 0.01
Rock outcrop	15	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7:							
Almac---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
Rock outcrop--------	25	Not rated		Not rated		Not rated	
8:							
Alnult--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Cutbanks cave	1.00	Content of large stones	1.00
		Frost action	0.50	Content of large stones	1.00	Droughty	0.05
Reggad--------------	15	Very limited		Very limited		Very limited	
		Content of large stones	1.00	Content of large stones	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Content of large stones	1.00
				Cutbanks cave	0.10		
9:							
Altapeak------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	0.90
						Gravel content	0.41
10:							
Altapeak------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.90
						Gravel content	0.41
11:							
Altapeak------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.90
						Gravel content	0.41
12:							
Altapeak------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	1.00
						Gravel content	0.41
13:							
Altapeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.90
						Gravel content	0.41
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Cutbanks cave	1.00	Content of large stones	1.00
		Frost action	0.50	Content of large stones	1.00	Droughty	0.05

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14:							
Altapeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	1.00
						Gravel content	0.41
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large	1.00	Cutbanks cave	1.00	Content of large	1.00
		stones		Content of large	1.00	stones	
		Frost action	0.50	stones		Droughty	0.05
15:							
Altapeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	1.00
						Gravel content	0.41
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large	1.00	Cutbanks cave	1.00	Content of large	1.00
		stones		Content of large	1.00	stones	
		Frost action	0.50	stones		Droughty	0.05
16:							
Anatone-------------	60	Very limited		Very limited		Very limited	
		Depth to hard	1.00	Depth to hard	1.00	Depth to bedrock	1.00
		bedrock		bedrock		Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Content of large	0.74	Content of large	0.74	Content of large	1.00
		stones		stones		stones	
		Frost action	0.50	Cutbanks cave	0.10		
Blewett-------------	30	Very limited		Very limited		Very limited	
		Depth to hard	1.00	Depth to hard	1.00	Depth to bedrock	1.00
		bedrock		bedrock		Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.93
						Content of large	0.74
						stones	
17:							
Anatone-------------	70	Very limited		Very limited		Very limited	
		Depth to hard	1.00	Depth to hard	1.00	Depth to bedrock	1.00
		bedrock		bedrock		Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Content of large	0.74	Content of large	0.74	Content of large	1.00
		stones		stones		stones	
		Frost action	0.50	Cutbanks cave	0.10		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
18:							
Andic Cryochrepts---	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large	0.16	Content of large	1.00
		Content of large	0.16	stones		stones	
		stones		Cutbanks cave	0.10		

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
19:							
Andic Cryumbrepts---	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.33
						Content of large stones	0.08
						Gravel content	0.01
20:							
Andic Cryumbrepts---	75	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Droughty	0.98
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.90
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.08
21:							
Andic Cryumbrepts---	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Droughty	0.98
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.90
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.08
Haplocryods---------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.20
Rock outcrop--------	15	Not rated		Not rated		Not rated	
22:							
Andic Cryumbrepts---	55	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Droughty	0.98
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.90
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.08
Rock outcrop--------	20	Not rated		Not rated		Not rated	
23:							
Andic Cryumbrepts---	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.90	Slope	1.00	Droughty	0.93
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.90
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24:							
Andic Haplumbrepts--	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.54	Slope	1.00	Gravel content	0.92
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.73
						Depth to bedrock	0.54
						Content of large stones	0.08
Rock outcrop--------	30	Not rated		Not rated		Not rated	
25:							
Angle---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.34
						Content of large stones	0.01
26:							
Aquic Cryumprepts---	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Flooding	0.80		
27:							
Ardening------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.20
28:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00		
29:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
30:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
31:							
Ardenmont-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
Swakane-------------	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.92
						Gravel content	0.08

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
32:							
Ardenvoir	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.95
				Depth to hard bedrock	0.05	Content of large stones	0.74
						Gravel content	0.35
33:							
Ardenvoir	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.95
				Depth to hard bedrock	0.05	Content of large stones	0.74
						Gravel content	0.35
34:							
Azwell	75	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.79	Slope	1.00	Droughty	0.92
		Frost action	0.50	Content of large stones	0.14	Depth to bedrock	0.80
		Content of large stones	0.14	Cutbanks cave	0.10	Content of large stones	0.20
						Gravel content	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
35:							
Bagmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.33
				Depth to soft bedrock	0.01	Gravel content	0.16
						Content of large stones	0.03
						Depth to bedrock	0.01
36:							
Bigcreek	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.14
						Droughty	0.01
37:							
Billyridge	75	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.20
						Gravel content	0.01
38:							
Billyridge	75	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Cutbanks cave	1.00	Slope	0.63
		Frost action	0.50	Slope	0.63	Content of large stones	0.20
						Gravel content	0.01
39:							
Billyridge	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.20
						Gravel content	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
40:							
Bisping-------------	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	0.04
		Slope	0.04	Slope	0.04		
41:							
Bisping-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
42:							
Bisping-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
43:							
Bjork---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.90	Depth to bedrock	0.90
		Frost action	0.50	Cutbanks cave	0.10		
44:							
Bjork---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.46	Depth to bedrock	0.46
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.01
Rock outcrop--------	30	Not rated		Not rated		Not rated	
45:							
Blag----------------	45	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.25
Cle Elum------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.79	Depth to bedrock	0.80
		Frost action	0.50	Cutbanks cave	0.10		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
46:							
Blag----------------	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.25
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
47:							
Blewett	65	Very limited		Very limited		Very limited	
		Depth to hard	1.00	Depth to hard	1.00	Depth to bedrock	1.00
		bedrock		bedrock		Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.93
						Content of large	0.74
						stones	
Rock outcrop	20	Not rated		Not rated		Not rated	
48:							
Borland	85	Very limited		Very limited		Very limited	
		Depth to hard	1.00	Depth to hard	1.00	Depth to bedrock	1.00
		bedrock		bedrock		Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
49:							
Borland	60	Very limited		Very limited		Very limited	
		Depth to hard	1.00	Depth to hard	1.00	Depth to bedrock	1.00
		bedrock		bedrock		Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
Rock outcrop	20	Not rated		Not rated		Not rated	
50:							
Brief	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.46
						Gravel content	0.41
51:							
Brisky	65	Very limited		Very limited		Very limited	
		Depth to hard	1.00	Depth to hard	1.00	Depth to bedrock	1.00
		bedrock		bedrock		Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.94
						Content of large	0.20
						stones	
Rock outcrop	20	Not rated		Not rated		Not rated	
52:							
Burch	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
53:							
Burnscreek	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large	0.23	Content of large	0.54
		Content of large	0.23	stones		stones	
		stones		Cutbanks cave	0.10	Droughty	0.32
54:							
Burrant	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55:							
Burrant-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
56:							
Cashmont------------	80	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
57:							
Cashmont------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.22
						Content of large stones	0.01
58:							
Chapot--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
59:							
Chinkmin------------	85	Very limited		Very limited		Very limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.02
		Depth to saturated zone	0.02	Slope	1.00	Content of large stones	0.01
60:							
Chinkmin------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.02
		Depth to saturated zone	0.02	Depth to saturated zone	1.00	Content of large stones	0.01
61:							
Chinkmin------------	40	Very limited		Very limited		Very limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.02
		Depth to saturated zone	0.02	Slope	1.00	Content of large stones	0.01
Altapeak------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	1.00
						Gravel content	0.41
62:							
Chinkmin------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.02
		Depth to saturated zone	0.02	Depth to saturated zone	1.00	Content of large stones	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
62:							
Altapeak------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	1.00
						Gravel content	0.41
63:							
Chiwaukum-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.32
64:							
Chiwaukum-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.14	Content of large stones	0.74
		Content of large stones	0.14	Cutbanks cave	0.10	Droughty	0.16
65:							
Chiwaukum-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.74
66:							
Chiwaukum-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.24	Content of large stones	0.99
		Content of large stones	0.24	Cutbanks cave	0.10	Droughty	0.34
67:							
Chiwaukum-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.32
Chiwaukum, south----	35	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.74
68:							
Chiwaukum-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.32
Chiwaukum, south----	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.74
69:							
Chiwawa-------------	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.50

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70:							
Choralmont, till substratum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.50
Choralmont	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.50
71:							
Choralmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.50
72:							
Choralmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.50
73:							
Choralmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.50
74:							
Choralmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.50
75:							
Choralmont	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.50
Limking	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.74
		Content of large stones	0.03	Depth to hard bedrock	0.42	Content of large stones	0.20
				Content of large stones	0.03		
76:							
Chumstick	75	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Droughty	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.74
		Content of large stones	0.07	Content of large stones	0.07		
77:							
Chumstick	75	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.74
		Content of large stones	0.07	Content of large stones	0.07		

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
78:							
Chumstick-----------	80	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.74
79:							
Cle Elum------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Depth to bedrock	0.06
		Frost action	0.50	Depth to soft bedrock	0.06		
80:							
Cle Elum------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Depth to bedrock	0.06
		Frost action	0.50	Depth to soft bedrock	0.06		
81:							
Coopmont------------	85	Very limited		Very limited		Very limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Gravel content	0.18
82:							
Coopmont------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Gravel content	0.18
83:							
Cowiche-------------	45	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.96	Slope	0.96
		Slope	0.96	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Cowiche, very deep--	40	Very limited		Somewhat limited		Somewhat limited	
		Frost action	1.00	Slope	0.96	Slope	0.96
		Slope	0.96	Cutbanks cave	0.10		
84:							
Cowiche-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Cowiche, very deep--	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
85:							
Cryomont------------	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
		Content of large	0.25	Flooding	0.80	Droughty	1.00
				Content of large stones	0.25	Content of large stones	0.20
						Gravel content	0.09

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
86:							
Cryomont------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Droughty	1.00
		Flooding	0.40	Slope	1.00	Slope	1.00
		Content of large stones	0.29	Content of large stones	0.29	Content of large stones	0.20
						Gravel content	0.09
87:							
Cryomont------------	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
		Content of large stones	0.38	Flooding	0.80	Droughty	1.00
				Content of large stones	0.38	Content of large stones	0.99
						Gravel content	0.01
Cryomont, fan-------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Droughty	1.00
		Flooding	0.40	Slope	1.00	Slope	1.00
		Content of large stones	0.39	Content of large stones	0.39	Content of large stones	0.99
						Gravel content	0.01
88:							
Culving-------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.99	Slope	1.00	Depth to bedrock	0.99
		Shrink-swell	0.50	Cutbanks cave	1.00	Droughty	0.48
		Frost action	0.50			Content of large stones	0.11
						Gravel content	0.01
Rock outcrop--------	20	Not rated		Not rated		Not rated	
89:							
Culvop--------------	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10	Droughty	1.00
						Gravel content	0.89
						Content of large stones	0.38
90:							
Devore--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Content of large stones	0.93	Slope	1.00	Droughty	1.00
		Depth to hard bedrock	0.84	Content of large stones	0.93	Content of large stones	0.99
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.84
						Gravel content	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
91:							
Dinkelman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
92:							
Dinkelman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01
93:							
Dinkelman-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01
Rock outcrop--------	25	Not rated		Not rated		Not rated	
94:							
Dinkels-------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
95:							
Dinkels-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
96:							
Dinkels-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01
97:							
Domkey--------------	80	Very limited		Very limited		Very limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Slope	1.00		
98:							
Domkey--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
99:							
Domkey--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
McCree--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.83
				Depth to hard bedrock	0.05	Gravel content	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100:							
Dragoon	80	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Depth to soft bedrock Cutbanks cave	 1.00 0.90 0.10	Very limited Slope Depth to bedrock	 1.00 0.90
101:							
Dragoon	75	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Depth to soft bedrock Cutbanks cave	 1.00 0.71 0.10	Very limited Slope Depth to bedrock	 1.00 0.71
102:							
Entiat	85	Very limited Slope Depth to soft bedrock Frost action	 1.00 1.00 0.50	Very limited Depth to soft bedrock Slope Cutbanks cave	 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Gravel content Content of large stones	 1.00 1.00 1.00 0.22 0.01
103:							
Entiat	60	Very limited Slope Depth to soft bedrock Frost action	 1.00 1.00 0.50	Very limited Depth to soft bedrock Slope Cutbanks cave	 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Gravel content Content of large stones	 1.00 1.00 1.00 0.22 0.01
Rock outcrop	25	Not rated		Not rated		Not rated	
104:							
Entic Haplumbrepts	90	Very limited Slope Content of large stones Frost action	 1.00 1.00 0.50	Very limited Slope Cutbanks cave Content of large stones Depth to hard bedrock	 1.00 1.00 1.00 1.00	Very limited Slope Content of large stones Droughty	 1.00 1.00 1.00
105:							
Esmeralda	75	Very limited Slope Content of large stones Frost action	 1.00 0.73 0.50	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.73 0.10	Very limited Slope Content of large stones Droughty Gravel content	 1.00 0.84 0.20 0.11
106:							
Esmeralda	45	Very limited Slope Content of large stones Frost action	 1.00 0.73 0.50	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.73 0.10	Very limited Slope Content of large stones Droughty Gravel content	 1.00 0.84 0.20 0.11
Rock outcrop	35	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107:							
Fears	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.99
		Content of large stones	0.25	Content of large stones	0.25	Droughty	0.28
108:							
Fears	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.99
		Content of large stones	0.25	Content of large stones	0.25	Droughty	0.28
Devore	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Content of large stones	0.93	Slope	1.00	Droughty	1.00
		Depth to hard bedrock	0.84	Content of large stones	0.93	Content of large stones	0.99
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.84
						Gravel content	0.01
109:							
Fernow	80	Very limited		Very limited		Very limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Slope	1.00		
110:							
Fernow	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
111:							
Fernow	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
Serene	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Cutbanks cave	1.00	Droughty	1.00
				Depth to soft bedrock	0.90	Depth to bedrock	0.90
				Content of large stones	0.01	Content of large stones	0.03
						Gravel content	0.02
112:							
Fluvaquents	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.80		
113:							
Georgecreek	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	0.10	Slope	0.04
		Frost action	0.50	Slope	0.04		
		Slope	0.04				

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
114:							
Georgecreek	80	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
115:							
Georgecreek	80	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
116:							
Georgecreek	50	Somewhat limited Shrink-swell Frost action Slope	 0.50 0.50 0.04	Somewhat limited Cutbanks cave Slope	 0.10 0.04	Somewhat limited Slope	 0.04
Dragoon	30	Somewhat limited Shrink-swell Frost action Slope	 0.50 0.50 0.04	Somewhat limited Depth to soft bedrock Cutbanks cave Slope	 0.90 0.10 0.04	Somewhat limited Depth to bedrock Slope	 0.90 0.04
117:							
Georgecreek	40	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Dragoon	40	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Depth to soft bedrock Cutbanks cave	 1.00 0.90 0.10	Very limited Slope Depth to bedrock	 1.00 0.90
118:							
Gilpar	80	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.01	Very limited Slope Cutbanks cave Content of large stones	 1.00 0.10 0.01	Very limited Slope Content of large stones Droughty Gravel content	 1.00 1.00 0.12 0.01
119:							
Gilpar	40	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.01	Very limited Slope Cutbanks cave Content of large stones	 1.00 0.10 0.01	Very limited Slope Content of large stones Droughty Gravel content	 1.00 1.00 0.12 0.01
Nimue	30	Very limited Slope Content of large stones Frost action	 1.00 0.53 0.50	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.53 0.10	Very limited Slope Content of large stones Droughty	 1.00 1.00 0.26

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
120:							
Gilpar	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	1.00
		Content of large stones	0.01	Content of large stones	0.01	Droughty	0.12
						Gravel content	0.01
Nimue	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.14
Rock outcrop	20	Not rated		Not rated		Not rated	
121:							
Gilpar	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	1.00
		Content of large stones	0.01	Content of large stones	0.01	Droughty	0.12
						Gravel content	0.01
Rock outcrop	25	Not rated		Not rated		Not rated	
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.14
				Depth to hard bedrock	0.96		
124:							
Goffpeak	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.14
				Depth to hard bedrock	0.96		
Fears	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.99
		Content of large stones	0.25	Content of large stones	0.25	Droughty	0.28
125:							
Haplocryods, cold	45	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Cutbanks cave	1.00	Depth to bedrock	0.84
		Depth to hard bedrock	0.84	Slope	1.00	Droughty	0.67

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
125:							
Haplocryods, stony--	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.20
126:							
Haplocryods---------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.03
				Depth to hard bedrock	0.26		
Andic Cryochrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.16	Content of large stones	1.00
		Content of large stones	0.16	Cutbanks cave	0.10		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
127:							
Haploxerolls--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.95
						Gravel content	0.72
						Droughty	0.01
128:							
Haploxerolls--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.95
						Gravel content	0.72
						Droughty	0.01
129:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	0.43
		Content of large stones	0.17	Content of large stones	0.17	Content of large stones	0.01
				Depth to soft bedrock	0.01	Depth to bedrock	0.01
Andic Cryumbrepts---	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.75
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.08
						Gravel content	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
130:							
Humicryods	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Droughty	0.43
		Content of large stones	0.17	Content of large stones	0.17	Content of large stones	0.01
				Depth to soft bedrock	0.01	Depth to bedrock	0.01
Andic Cryochrepts	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.16	Content of large stones	1.00
		Content of large stones	0.16	Cutbanks cave	0.10		
Rock outcrop	20	Not rated		Not rated		Not rated	
131:							
Humicryods	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Droughty	0.43
		Content of large stones	0.17	Content of large stones	0.17	Content of large stones	0.01
				Depth to soft bedrock	0.01	Depth to bedrock	0.01
Andic Cryumbrepts	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.14
				Depth to hard bedrock	0.32		
Rock outcrop	15	Not rated		Not rated		Not rated	
132:							
Hyprairie	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
133:							
Hyprairie	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
134:							
Hyprairie	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
Oldbutte	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
135:							
Icicle, south	40	Very limited Slope Content of large stones Frost action	 1.00 0.88 0.50	Very limited Slope Cutbanks cave Content of large stones	 1.00 1.00 0.88	Very limited Slope Droughty Content of large stones	 1.00 0.61 0.20
Icicle	40	Very limited Slope Content of large stones Frost action	 1.00 0.96 0.50	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.96 0.10	Very limited Slope Content of large stones Droughty	 1.00 0.92 0.61
136:							
Icicle	80	Very limited Slope Content of large stones Frost action	 1.00 0.88 0.50	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.88 0.10	Very limited Slope Droughty Content of large stones	 1.00 0.61 0.20
137:							
Icicle	80	Very limited Slope Content of large stones Frost action	 1.00 0.96 0.50	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.96 0.10	Very limited Slope Content of large stones Droughty	 1.00 0.92 0.61
138:							
Icicle	75	Very limited Slope Content of large stones Frost action	 1.00 0.96 0.50	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.96 0.10	Very limited Slope Content of large stones Droughty	 1.00 0.92 0.61
139:							
Icicle	85	Very limited Slope Content of large stones Frost action	 1.00 0.79 0.50	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.79 0.10	Very limited Slope Droughty Content of large stones	 1.00 0.56 0.20
140:							
Icicle	30	Very limited Slope Content of large stones Frost action	 1.00 1.00 0.50	Very limited Slope Cutbanks cave Content of large stones Depth to hard bedrock	 1.00 1.00 1.00 0.42	Very limited Slope Content of large stones Droughty	 1.00 1.00 0.56
Chumstick	25	Very limited Depth to hard bedrock Slope Frost action Content of large stones	 1.00 1.00 0.50 0.07	Very limited Depth to hard bedrock Slope Cutbanks cave Content of large stones	 1.00 1.00 0.10 0.07	Very limited Depth to bedrock Slope Droughty Content of large stones	 1.00 1.00 1.00 0.74
Rock outcrop	25	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
141:							
Icicle	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Cutbanks cave	1.00	Content of large stones	1.00
		Frost action	0.50	Content of large stones	1.00	Droughty	0.56
				Depth to hard bedrock	0.42		
Chumstick	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.74
Rock outcrop	25	Not rated		Not rated		Not rated	
142:							
Inkler	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.88	Droughty	0.70
				Cutbanks cave	0.10	Content of large stones	0.32
						Gravel content	0.01
143:							
Isella	40	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Cutbanks cave	0.10		
Fernow	35	Very limited		Very limited		Very limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Slope	1.00		
144:							
Isella	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
Fernow	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
145:							
Isella	40	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Cutbanks cave	0.10		
Nimue	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	0.53	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.26
146:							
Isella	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
146:							
Nimue---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.14
147:							
Kingmont------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Content of large stones	0.54
						Gravel content	0.04
148:							
Kladnick------------	85	Somewhat limited		Very limited		Somewhat limited	
		Content of large stones	0.32	Cutbanks cave	1.00	Content of large stones	0.92
				Content of large stones	0.32	Droughty	0.87
149:							
Kladnick------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	0.88
						Content of large stones	0.03
						Gravel content	0.02
150:							
Kladnick------------	80	Somewhat limited		Very limited		Very limited	
		Content of large stones	0.85	Cutbanks cave	1.00	Content of large stones	1.00
		Slope	0.04	Content of large stones	0.85	Droughty	1.00
				Slope	0.04	Gravel content	0.88
						Slope	0.04
151:							
Klapatche-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Cutbanks cave	1.00	Droughty	1.00
				Depth to soft bedrock	0.03	Content of large stones	0.95
				Content of large stones	0.01	Depth to bedrock	0.03
Altapeak------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.90
						Gravel content	0.41
152:							
Kloochman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.16
		Depth to hard bedrock	0.15	Cutbanks cave	0.10	Gravel content	0.11
						Droughty	0.03
						Content of large stones	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
153:							
Kloochman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.16
		Depth to hard bedrock	0.15	Cutbanks cave	0.10	Gravel content	0.11
						Droughty	0.03
						Content of large stones	0.01
154:							
Kloochman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.16
		Depth to hard bedrock	0.15	Cutbanks cave	0.10	Gravel content	0.11
						Droughty	0.03
						Content of large stones	0.01
155:							
Kloochman-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.16
		Depth to hard bedrock	0.15	Cutbanks cave	0.10	Gravel content	0.11
						Droughty	0.03
						Content of large stones	0.01
Inkler--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.88	Droughty	0.70
				Cutbanks cave	0.10	Content of large stones	0.32
						Gravel content	0.01
156:							
Kloochman-----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.11
		Depth to hard bedrock	0.06	Cutbanks cave	0.10	Depth to bedrock	0.06
						Droughty	0.03
						Content of large stones	0.01
Inkler--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.88	Droughty	0.70
				Cutbanks cave	0.10	Content of large stones	0.32
						Gravel content	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
157:							
Kloochman-----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.11
		Depth to hard bedrock	0.06	Cutbanks cave	0.10	Depth to bedrock	0.06
						Droughty	0.03
						Content of large stones	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157:							
Rock outcrop--------	15	Not rated		Not rated		Not rated	
158:							
Limking-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.31
				Depth to hard bedrock	0.01	Content of large stones	0.20
159:							
Limking-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.31
				Depth to hard bedrock	0.01	Content of large stones	0.20
Coopmont------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Gravel content	0.18
160:							
Limking-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.31
				Depth to hard bedrock	0.01	Content of large stones	0.20
Coopmont------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Gravel content	0.18
161:							
Limking-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.31
				Depth to hard bedrock	0.01	Content of large stones	0.20
Coopmont------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Gravel content	0.18
Rock outcrop--------	20	Not rated		Not rated		Not rated	
162:							
Limking-------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.31
				Depth to hard bedrock	0.01	Content of large stones	0.20
Rock outcrop--------	20	Not rated		Not rated		Not rated	
163:							
Line----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Gravel content	1.00
		Frost action	0.50	Slope	1.00	Slope	1.00
				Depth to dense layer	0.50	Droughty	0.05

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
164:							
Line----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Gravel content	1.00
		Frost action	0.50	Slope	1.00	Slope	1.00
				Depth to dense layer	0.50		
165:							
Line----------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.95
				Depth to dense layer	0.50	Content of large stones	0.38
						Droughty	0.04
166:							
Line----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Gravel content	1.00
		Frost action	0.50	Slope	1.00	Slope	1.00
				Depth to dense layer	0.50		
Vabbing-------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.11
						Gravel content	0.01
167:							
Loneridge-----------	85	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Content of large stones	0.20
		Frost action	0.50	Content of large stones	0.13		
		Content of large stones	0.13	Too clayey	0.12		
168:							
Loneridge-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.20
		Content of large stones	0.04	Too clayey	0.12		
				Content of large stones	0.04		
169:							
Loneridge-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Content of large stones	0.26	Content of large stones	0.95
		Frost action	0.50	Too clayey	0.12		
		Content of large stones	0.26	Cutbanks cave	0.10		
170:							
Macreeing-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.61	Content of large stones	0.68
		Content of large stones	0.33	Content of large stones	0.33	Droughty	0.55
				Cutbanks cave	0.10		

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
171:							
Macreeing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.61	Content of large stones	0.68
		Content of large stones	0.33	Content of large stones	0.33	Droughty	0.55
				Cutbanks cave	0.10		
172:							
Macreeing	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.61	Content of large stones	0.68
		Content of large stones	0.33	Content of large stones	0.33	Droughty	0.55
				Cutbanks cave	0.10		
Rock outcrop	30	Not rated		Not rated		Not rated	
173:							
Mansonia	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Content of large stones	0.01
174:							
Mansonia	50	Very limited		Very limited		Very limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	0.01
				Depth to hard bedrock	0.42		
Swakane	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.92
						Gravel content	0.08
Rock outcrop	20	Not rated		Not rated		Not rated	
175:							
Mansonia	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Droughty	0.01
				Depth to hard bedrock	0.42		
Swakane	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.92
						Gravel content	0.08
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
176:							
Marmont	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.90
		Slope	0.04	Slope	0.04	Slope	0.04
177:							
Marmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.90
178:							
Marmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.90
179:							
McCree	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.83
				Depth to hard bedrock	0.05	Gravel content	0.01
180:							
McCree	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.83
				Depth to hard bedrock	0.05	Gravel content	0.01
181:							
McCree	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.83
				Depth to hard bedrock	0.05	Gravel content	0.01
182:							
McCree	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.83
				Depth to hard bedrock	0.05	Gravel content	0.01
Palmich	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
183:							
McCree	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.83
				Depth to hard bedrock	0.05	Gravel content	0.01
Palmont	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Gravel content	0.08
						Content of large stones	0.03
						Droughty	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
184:							
McCree	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.83
				Depth to hard bedrock	0.05	Gravel content	0.01
Rock outcrop	25	Not rated		Not rated		Not rated	
185:							
Mippon	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Droughty	1.00
		Depth to saturated zone	0.75	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Content of large stones	0.01	Flooding	0.60	Flooding	0.60
				Content of large stones	0.01	Gravel content	0.25
186:							
Mippon	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Droughty	1.00
		Depth to saturated zone	0.75	Depth to saturated zone	1.00	Gravel content	0.98
		Content of large stones	0.05	Flooding	0.60	Depth to saturated zone	0.75
				Content of large stones	0.05	Flooding	0.60
						Content of large stones	0.20
187:							
Mippon	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Content of large stones	1.00
		Depth to saturated zone	0.75	Depth to saturated zone	1.00	Droughty	0.95
		Content of large stones	0.42	Flooding	0.60	Depth to saturated zone	0.75
				Content of large stones	0.42	Flooding	0.60
						Gravel content	0.06

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
188:							
Morical-------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Cutbanks cave	0.10	Slope	0.04
		Frost action	0.50	Slope	0.04	Depth to bedrock	0.03
		Slope	0.04	Depth to soft bedrock	0.03		
189:							
Morical-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Depth to bedrock	0.03
		Frost action	0.50	Depth to soft bedrock	0.03		
190:							
Morical-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Depth to bedrock	0.06
		Frost action	0.50	Depth to soft bedrock	0.06		
191:							
Morical-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Depth to bedrock	0.03
		Frost action	0.50	Depth to soft bedrock	0.03		
Dragoon-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.71	Depth to bedrock	0.71
		Frost action	0.50				
				Cutbanks cave	0.10		
192:							
Morical-------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Depth to bedrock	0.03
		Frost action	0.50	Depth to soft bedrock	0.03		
Dragoon-------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.90	Depth to bedrock	0.90
		Frost action	0.50				
				Cutbanks cave	0.10		
193:							
Morical-------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Depth to bedrock	0.03
		Frost action	0.50	Depth to soft bedrock	0.03		
Dragoon-------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	0.90	Depth to bedrock	0.90
		Frost action	0.50				
				Cutbanks cave	0.10		

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
194:							
Morical	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Depth to bedrock	0.03
		Frost action	0.50	Depth to soft bedrock	0.03		
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.09
195:							
Mountaineer	75	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Content of large stones	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Content of large stones	1.00	Content of large stones	1.00
		Depth to hard bedrock	0.01	Cutbanks cave	0.10	Depth to bedrock	0.01
196:							
Mountaineer	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Content of large stones	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Content of large stones	1.00	Content of large stones	1.00
		Depth to hard bedrock	0.01	Cutbanks cave	0.10	Depth to bedrock	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
197:							
Mountaineer	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Content of large stones	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Content of large stones	1.00	Content of large stones	1.00
		Depth to hard bedrock	0.01	Cutbanks cave	0.10	Depth to bedrock	0.01
Tillicum	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.96		
				Cutbanks cave	0.10		
Rock outcrop	15	Not rated		Not rated		Not rated	
198:							
Nahahum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
199:							
Nahahum-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
Taneum--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Content of large stones	0.03
		Frost action	0.50	Depth to hard bedrock	0.01		
200:							
Nard----------------	75	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
201:							
Nard----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
202:							
Nard----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Blag----------------	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.25
203:							
Nard----------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Brisky--------------	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.94
						Content of large stones	0.20
204:							
Nardine-------------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.83	Depth to saturated zone	1.00	Depth to saturated zone	0.83
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
205:							
Nardmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	1.00		
		Frost action	0.50				
206:							
Nardmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
207:							
Natapoc	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.34	Content of large stones	0.05
		Content of large stones	0.34	Cutbanks cave	0.10		
208:							
Natapoc	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.34	Content of large stones	0.05
		Content of large stones	0.34	Cutbanks cave	0.10		
		stones					
209:							
Natapoc	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.34	Content of large stones	0.05
		Content of large stones	0.34	Cutbanks cave	0.10		
Thow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.41
210:							
Naxing	75	Very limited		Very limited		Very limited	
		Frost action	1.00	Content of large stones	1.00	Content of large stones	1.00
		Content of large stones	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Cutbanks cave	0.10	Droughty	0.51
						Gravel content	0.01
211:							
Naxing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Content of large stones	1.00	Content of large stones	1.00
		Content of large stones	1.00	Cutbanks cave	0.10	Droughty	0.51
						Gravel content	0.01
212:							
Newbell	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.26

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
213:							
Nimue---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.14
214:							
Nimue---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	0.53	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.26
215:							
Nimue---------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.14
Rock outcrop--------	20	Not rated		Not rated		Not rated	
216:							
Nimue---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	0.53	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.26
Nimue, dry----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.14
217:							
Nimue, dry----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	0.60	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.14
Nimue---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	0.53	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.26
Rock outcrop--------	15	Not rated		Not rated		Not rated	
218:							
Oldbutte------------	85	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
219:							
Oldbutte	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
220:							
Palmich	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01
221:							
Palmich	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01
222:							
Palmich	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01
223:							
Palmich	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01
McCree	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.83
				Depth to hard bedrock	0.05	Gravel content	0.01
224:							
Palmich	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01
McCree	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.89	Content of large stones	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.83
				Depth to hard bedrock	0.05	Gravel content	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
225:							
Palmich	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.11
						Content of large stones	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
226:							
Palmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.33
						Gravel content	0.08
						Content of large stones	0.03
227:							
Palmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.33
						Gravel content	0.08
						Content of large stones	0.03
228:							
Palmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.35
						Content of large stones	0.32
						Gravel content	0.02
229:							
Palmont	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.33
						Gravel content	0.08
						Content of large stones	0.03
Rock outcrop	30	Not rated		Not rated		Not rated	
230:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.59
						Content of large stones	0.11
231:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Droughty	0.89
						Content of large stones	0.11

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
232:							
Ramparter	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.89
						Content of large stones	0.11
233:							
Ramparter	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.89
						Content of large stones	0.11
234:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.61
235:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.61
236:							
Ramparter	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.59
						Content of large stones	0.11
Wilma	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Droughty	0.65
		Depth to hard bedrock	0.03	Cutbanks cave	1.00	Content of large stones	0.20
						Depth to bedrock	0.03
237:							
Reggad	75	Very limited		Very limited		Very limited	
		Content of large stones	1.00	Content of large stones	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Content of large stones	1.00
				Cutbanks cave	0.10		
238:							
Reggad	40	Very limited		Very limited		Very limited	
		Content of large stones	1.00	Content of large stones	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Content of large stones	1.00
				Cutbanks cave	0.10		
Serene	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Cutbanks cave	1.00	Droughty	1.00
				Depth to soft bedrock	0.90	Depth to bedrock	0.90
				Content of large stones	0.01	Content of large stones	0.03
						Gravel content	0.02

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
239:							
Rock outcrop	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Blewett	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
						Gravel content	0.93
						Content of large stones	0.74
241:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Borland	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Droughty	1.00
		Frost action	0.50				
242:							
Rock outcrop	40	Not rated		Not rated		Not rated	
Chumstick	25	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.74
Icicle	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Cutbanks cave	1.00	Content of large stones	1.00
		Frost action	0.50	Content of large stones	1.00	Droughty	0.56
				Depth to hard bedrock	0.42		
243:							
Rock outcrop	40	Not rated		Not rated		Not rated	
Chumstick	20	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.07	Content of large stones	0.07	Content of large stones	0.74

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
243:							
Icicle	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Cutbanks cave	1.00	Content of large stones	1.00
		Frost action	0.50	Content of large stones	1.00	Droughty	0.56
				Depth to hard bedrock	0.42		
244:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Rubble land	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop	35	Not rated		Not rated		Not rated	
Rubble land	25	Not rated		Not rated		Not rated	
Serene	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Cutbanks cave	1.00	Droughty	1.00
				Depth to soft bedrock	0.90	Depth to bedrock	0.90
				Content of large stones	0.01	Content of large stones	0.03
						Gravel content	0.02
246:							
Rubble land	65	Not rated		Not rated		Not rated	
Rock outcrop	20	Not rated		Not rated		Not rated	
247:							
Safety	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to soft bedrock	0.90	Droughty	0.94
				Cutbanks cave	0.10	Depth to bedrock	0.90
						Content of large stones	0.01
248:							
Safety	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to soft bedrock	0.90	Droughty	0.94
				Cutbanks cave	0.10	Depth to bedrock	0.90
						Content of large stones	0.01
249:							
Safety	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to soft bedrock	0.90	Droughty	0.94
				Cutbanks cave	0.10	Depth to bedrock	0.90
						Content of large stones	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
250:							
Safety--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to soft bedrock	0.90	Droughty	0.94
						Depth to bedrock	0.90
				Cutbanks cave	0.10	Content of large stones	0.01
Rock outcrop--------	15	Not rated		Not rated		Not rated	
251:							
Saska---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.45	Droughty	0.16
		Content of large stones	0.45	Cutbanks cave	0.10	Content of large stones	0.01
252:							
Saska---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.45	Droughty	0.16
		Content of large stones	0.45	Cutbanks cave	0.10	Content of large stones	0.01
253:							
Saska---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.03
254:							
Saska---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.03
255:							
Saska---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.42	Content of large stones	0.68
		Content of large stones	0.42	Cutbanks cave	0.10	Droughty	0.15
256:							
Saska---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.42	Content of large stones	0.68
		Content of large stones	0.42	Cutbanks cave	0.10	Droughty	0.15
257:							
Saska---------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.45	Droughty	0.16
		Content of large stones	0.45	Cutbanks cave	0.10	Content of large stones	0.01
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
258:							
Saska	40	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.45	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.45 0.10	Very limited Slope Droughty Content of large stones	 1.00 0.16 0.01
Saska, bouldery	35	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.42	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.42 0.10	Very limited Slope Content of large stones Droughty	 1.00 0.68 0.15
259:							
Saska, south	40	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope Content of large stones	 1.00 0.03
Saska	35	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.42	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.42 0.10	Very limited Slope Content of large stones Droughty	 1.00 0.68 0.15
260:							
Saska	40	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.45	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.45 0.10	Very limited Slope Droughty Content of large stones	 1.00 0.16 0.01
Saska, bouldery	35	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.42	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.42 0.10	Very limited Slope Content of large stones Droughty	 1.00 0.68 0.15
261:							
Saska	35	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.45	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.45 0.10	Very limited Slope Droughty Content of large stones	 1.00 0.16 0.01
Saska, bouldery	30	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.42	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.42 0.10	Very limited Slope Content of large stones Droughty	 1.00 0.68 0.15
Rock outcrop	15	Not rated		Not rated		Not rated	
262:							
Saska, south	35	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope Content of large stones	 1.00 0.03

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
262:							
Saska	30	Very limited Slope Frost action Content of large stones	 1.00 0.50 0.45	Very limited Slope Content of large stones Cutbanks cave	 1.00 0.45 0.10	Very limited Slope Droughty Content of large stones	 1.00 0.16 0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
263:							
Saydab	80	Very limited Slope Content of large stones Frost action Depth to hard bedrock	 1.00 0.87 0.50 0.01	Very limited Depth to hard bedrock Slope Content of large stones Cutbanks cave	 1.00 1.00 0.87 0.10	Very limited Content of large stones Slope Gravel content Depth to bedrock	 1.00 1.00 0.04 0.01
264:							
Scotties	85	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	 1.00 1.00 0.88	Very limited Slope Gravel content Content of large stones	 1.00 0.11 0.01
265:							
Serene	80	Very limited Slope Content of large stones	 1.00 0.01	Very limited Slope Cutbanks cave Depth to soft bedrock Content of large stones	 1.00 1.00 0.90 0.01	Very limited Slope Droughty Depth to bedrock Content of large stones Gravel content	 1.00 1.00 0.90 0.03 0.02
266:							
Serene	60	Very limited Slope Content of large stones	 1.00 0.01	Very limited Slope Cutbanks cave Depth to soft bedrock Content of large stones	 1.00 1.00 0.90 0.01	Very limited Slope Droughty Depth to bedrock Content of large stones Gravel content	 1.00 1.00 0.90 0.03 0.02
Rock outcrop	25	Not rated		Not rated		Not rated	
267:							
Serpen	85	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	 1.00 1.00 0.61	Very limited Slope Gravel content Content of large stones Droughty	 1.00 1.00 0.11 0.04
268:							
Serpen	80	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	 1.00 1.00 0.61	Very limited Slope Gravel content Content of large stones Droughty	 1.00 1.00 0.11 0.04

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
269:							
Shadypass-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	1.00
270:							
Shamel--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
271:							
Shamel--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
272:							
Shamel--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
273:							
Shaser--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
Blewett-------------	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
						Gravel content	0.93
						Content of large stones	0.74
274:							
Shaser--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
Brisky--------------	40	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
						Gravel content	0.94
						Content of large stones	0.20
275:							
Shaser--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
Chapot--------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Gravel content	0.25
		Frost action	0.50				

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
276:							
Skipeak	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Droughty	0.67
						Gravel content	0.41
277:							
Skipeak	40	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Droughty	0.67
						Gravel content	0.41
Line	35	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Gravel content	1.00
		Frost action	0.50	Slope	1.00	Slope	1.00
				Depth to dense layer	0.50	Droughty	0.05
278:							
Soda	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.20
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.01
279:							
Soda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.20
		Content of large stones	0.19	Content of large stones	0.19	Droughty	0.08
280:							
Soda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.38
		Content of large stones	0.18	Content of large stones	0.18	Droughty	0.11
281:							
Soda	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.38
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.01
282:							
Soda	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.38
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.01
283:							
Soda	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.38
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
283:							
Rock outcrop	20	Not rated		Not rated		Not rated	
284:							
Soda	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.38
		Content of large stones	0.18	Content of large stones	0.18	Droughty	0.11
Rock outcrop	20	Not rated		Not rated		Not rated	
285:							
Soda	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.20
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.01
Soda, cold	35	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.38
		Content of large stones	0.18	Content of large stones	0.18	Droughty	0.11
286:							
Soda	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.20
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.01
Soda, cold	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.38
		Content of large stones	0.18	Content of large stones	0.18	Droughty	0.11
287:							
Soda	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.38
		Content of large stones	0.18	Content of large stones	0.18	Droughty	0.11
Soda, cold	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.20
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
288:							
Sodacreek	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.56
		Depth to saturated zone	0.56	Depth to saturated zone	1.00	Content of large stones	0.20

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
289:							
Sodacreek-----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.56
		Depth to saturated zone	0.56	Depth to saturated zone	1.00	Content of large stones	0.20
Rock outcrop--------	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Cutbanks cave	0.10		
Saska---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.45	Droughty	0.16
		Content of large stones	0.45	Cutbanks cave	0.10	Content of large stones	0.01
291:							
Spodic Vitrixerands	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
Saska---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.45	Droughty	0.16
		Content of large stones	0.45	Cutbanks cave	0.10	Content of large stones	0.01
292:							
Stemilt-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85	Content of large stones	0.85	Content of large stones	0.11
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
293:							
Stemilt-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85	Content of large stones	0.85	Content of large stones	0.11
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
294:							
Surgh---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.01
				Depth to hard bedrock	0.77		

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
295:							
Surgh---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.01
				Depth to hard bedrock	0.77		
296:							
Surgh---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.01
				Depth to hard bedrock	0.77		
297:							
Surgh---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Content of large stones	1.00
		Content of large stones	0.77	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.77	Gravel content	0.06
Wedge---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Gravel content	0.18
						Droughty	0.17
298:							
Swakane-------------	75	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.92
						Gravel content	0.08
299:							
Swakane-------------	75	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.92
						Gravel content	0.08
300:							
Swakane-------------	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.92
						Gravel content	0.08
Rock outcrop--------	25	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
301:							
Swakane-------------	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.92
						Gravel content	0.08
Rock outcrop--------	35	Not rated		Not rated		Not rated	
302:							
Switchback----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.80
				Depth to soft bedrock	0.79	Droughty	0.33
						Content of large stones	0.08
						Gravel content	0.01
303:							
Switchback----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.80
				Depth to soft bedrock	0.79	Droughty	0.33
						Content of large stones	0.08
						Gravel content	0.01
304:							
Switchback----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.80
				Depth to soft bedrock	0.79	Droughty	0.33
						Content of large stones	0.08
						Gravel content	0.01
305:							
Taneum--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Content of large stones	0.03
		Frost action	0.50	Depth to hard bedrock	0.01		
306:							
Thow----------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.41
307:							
Thow----------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.41
308:							
Thow----------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.41

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
309:							
Thow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.41
Domkey	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
Rock outcrop	20	Not rated		Not rated		Not rated	
310:							
Thowson	85	Very limited		Very limited		Not limited	
		Frost action	1.00	Cutbanks cave	1.00		
311:							
Thowson	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	0.63
		Slope	0.63	Slope	0.63		
312:							
Thowson	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
313:							
Thowson	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
314:							
Thowson	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10	Content of large stones	0.01
315:							
Thowson	60	Very limited		Very limited		Very limited	
		Frost action	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Cutbanks cave	0.10	Content of large stones	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
316:							
Thowson	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10	Content of large stones	0.01
Rock outcrop	15	Not rated		Not rated		Not rated	
317:							
Thowson	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10	Content of large stones	0.01
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
318:							
Thowson, stony------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10	Content of large stones	0.01
Thowson------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
319:							
Tillicum-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	1.00		
				Cutbanks cave	0.10		
320:							
Tillicum-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.96		
				Cutbanks cave	0.10		
321:							
Tillicum-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.96		
				Cutbanks cave	0.10		
322:							
Tillmont-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.50
				Depth to hard bedrock	0.77		
323:							
Tillmont-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.50
				Depth to hard bedrock	0.77		
324:							
Tillmont-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.50
				Depth to hard bedrock	0.77		
Inkler-------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.88	Droughty	0.70
				Cutbanks cave	0.10	Content of large stones	0.32
						Gravel content	0.01

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
325:							
Tiptop	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.94
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	0.20
326:							
Tiptop	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.94
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	0.20
Naxing	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Content of large stones	1.00	Content of large stones	1.00
		Content of large stones	1.00	Cutbanks cave	0.10	Droughty	0.51
						Gravel content	0.01
327:							
Totem	85	Very limited		Very limited		Very limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	1.00
		Slope	1.00	Slope	1.00		
328:							
Totem	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
329:							
Totem	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
330:							
Totem	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		
Chiwaukum	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.14	Content of large stones	0.74
		Content of large stones	0.14	Cutbanks cave	0.10	Droughty	0.16
331:							
Treen	80	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10	Droughty	0.97
332:							
Treen	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	0.10	Droughty	0.97

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
332:							
Klapatche-----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Cutbanks cave	1.00	Droughty	1.00
				Depth to soft bedrock	0.03	Content of large stones	0.95
				Content of large stones	0.01	Depth to bedrock	0.03
333:							
Tronsen-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	1.00	Content of large stones	0.84
		Frost action	0.50	Too clayey	0.03		
334:							
Tronsen-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Content of large stones	0.84
		Frost action	0.50	Too clayey	0.03		
335:							
Tyee----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
						Too sandy	0.50
						Gravel content	0.36
336:							
Tyee----------------	85	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.90
						Gravel content	0.36
						Content of large stones	0.01
337:							
Tyee----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.90
						Gravel content	0.36
						Content of large stones	0.01
338:							
Tyee----------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.90
						Gravel content	0.36
						Content of large stones	0.01
Bisping-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	1.00	Cutbanks cave	1.00		

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
339:							
Typic Cryaquands	80	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Cutbanks cave	0.10	Gravel content	0.01
340:							
Vabbing	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.11
						Gravel content	0.01
341:							
Vabbing	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.11
						Gravel content	0.01
342:							
Vabbing	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.11
						Gravel content	0.01
Gilpar	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	1.00
		Content of large stones	0.01	Content of large stones	0.01	Droughty	0.12
						Gravel content	0.01
343:							
Vabbing	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.11
						Gravel content	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
344:							
Vabus	75	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Depth to saturated zone	0.75	Depth to saturated zone	1.00	Droughty	0.91
		Frost action	0.50	Slope	1.00	Depth to saturated zone	0.75
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.25
345:							
Vabus	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.75	Cutbanks cave	1.00	Droughty	0.91
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.25

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
346:							
Vabus	40	Very limited Slope Depth to saturated zone Frost action Content of large stones	 1.00 0.75 0.50 0.01	Very limited Cutbanks cave Depth to saturated zone Slope Content of large stones	 1.00 1.00 1.00 0.01	Very limited Slope Droughty Depth to saturated zone Gravel content	 1.00 0.91 0.75 0.25
Chinkmin	35	Very limited Frost action Slope Depth to saturated zone	 1.00 1.00 0.02	Very limited Cutbanks cave Depth to saturated zone Slope	 1.00 1.00 1.00	Very limited Slope Depth to saturated zone Content of large stones	 1.00 0.02 0.01
347:							
Vabus	40	Very limited Slope Depth to saturated zone Frost action Content of large stones	 1.00 0.75 0.50 0.01	Very limited Slope Cutbanks cave Depth to saturated zone Content of large stones	 1.00 1.00 1.00 0.01	Very limited Slope Droughty Depth to saturated zone Gravel content	 1.00 0.91 0.75 0.25
Chinkmin	35	Very limited Slope Frost action Depth to saturated zone	 1.00 1.00 0.02	Very limited Slope Cutbanks cave Depth to saturated zone	 1.00 1.00 1.00	Very limited Slope Depth to saturated zone Content of large stones	 1.00 0.02 0.01
348:							
Varelum	85	Somewhat limited Shrink-swell Frost action	 0.50 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
349:							
Varelum	85	Somewhat limited Slope Shrink-swell Frost action	 0.63 0.50 0.50	Somewhat limited Slope Cutbanks cave	 0.63 0.10	Somewhat limited Slope	 0.63
350:							
Varelum	85	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
351:							
Varelum	80	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
352:							
Vitricryands	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.82
				Depth to soft bedrock	0.79	Depth to bedrock	0.80
353:							
Vitricryands	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.82
				Depth to soft bedrock	0.79	Depth to bedrock	0.80
Rock outcrop	30	Not rated		Not rated		Not rated	
354:							
Wagberg	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Content of large stones	0.38
		Content of large stones	0.02	Content of large stones	0.02	Gravel content	0.13
355:							
Wagberg	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.38
		Content of large stones	0.02	Content of large stones	0.02	Gravel content	0.13
356:							
Wagberg	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.38
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.13
Wagberg, south	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.99
		Content of large stones	0.05	Content of large stones	0.05	Gravel content	0.01
357:							
Wagberg	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.38
		Content of large stones	0.02	Content of large stones	0.02	Gravel content	0.13
Swakane	30	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
						Slope	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.92
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.08
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
358:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Gravel content	0.18
						Droughty	0.17
359:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Gravel content	0.18
						Droughty	0.17
360:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10	Droughty	0.50
						Gravel content	0.18
361:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10	Droughty	0.50
						Gravel content	0.18
362:							
Wedge---------------	60	Not limited		Somewhat limited		Somewhat limited	
				Cutbanks cave	0.10	Droughty	0.50
						Gravel content	0.18
Typic Cryaquands----	30	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Cutbanks cave	0.10	Gravel content	0.01
363:							
Wedge---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Gravel content	0.18
						Droughty	0.17
Wedge, cold---------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10	Droughty	0.50
						Gravel content	0.18
364:							
Wedgemont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	1.00
						Droughty	0.06
365:							
Wilma---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Droughty	0.65
		Depth to hard bedrock	0.03	Cutbanks cave	1.00	Content of large stones	0.20
						Depth to bedrock	0.03

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
366:							
Wilma	75	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Droughty	0.65
		Depth to hard bedrock	0.03	Cutbanks cave	1.00	Content of large stones	0.20
						Depth to bedrock	0.03
Rock outcrop	15	Not rated		Not rated		Not rated	
367:							
Yaxing	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
368:							
Yaxing	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
369:							
Yaxon	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
370:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
371:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
372:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
373:							
Yaxon	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
374:							
Zeb	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.54
						Droughty	0.26

Table 10b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1:					
Aeric Fluvaquents	75	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.68		
2:					
Almac	85	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
				Slope	1.00
3:					
Almac	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
4:					
Almac	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
5:					
Almac	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	1.00
Azwell	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Restricted permeability	0.50	Slope	1.00
				Seepage	0.50
		Content of large stones	0.14	Content of large stones	0.49
6:					
Almac	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	1.00
Azwell	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Restricted permeability	0.50	Slope	1.00
				Seepage	0.50
		Content of large stones	0.14	Content of large stones	0.49

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
6:					
Rock outcrop	15	Not rated		Not rated	
7:					
Almac	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	1.00
Rock outcrop	25	Not rated		Not rated	
8:					
Alnult	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Reggad	15	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Content of large stones	1.00	Seepage	1.00
9:					
Altapeak	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.59	Depth to soft bedrock	0.13
10:					
Altapeak	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.59	Depth to soft bedrock	0.13
11:					
Altapeak	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.59	Depth to soft bedrock	0.13
12:					
Altapeak	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.86	Depth to soft bedrock	0.61
13:					
Altapeak	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.86	Depth to soft bedrock	0.61

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
13:					
Alnult	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
14:					
Altapeak	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.86	Depth to soft bedrock	0.61
Alnult	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
15:					
Altapeak	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.86	Depth to soft bedrock	0.61
Alnult	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
16:					
Anatone	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.74	Content of large stones	0.80
Blewett	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
17:					
Anatone	70	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.74	Content of large stones	0.80
Rock outcrop	15	Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
18:					
Andic Cryochrepts---	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Content of large stones	0.99
		Content of large stones	0.16	Seepage	0.50
19:					
Andic Cryumbrepts---	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
20:					
Andic Cryumbrepts---	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01	Content of large stones	0.12
21:					
Andic Cryumbrepts---	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01	Content of large stones	0.12
Haplocryods---------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop--------	15	Not rated		Not rated	
22:					
Andic Cryumbrepts---	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01	Content of large stones	0.12
Rock outcrop--------	20	Not rated		Not rated	
23:					
Andic Cryumbrepts---	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
Rock outcrop--------	30	Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
24:					
Andic Haplumbrepts--	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop--------	30	Not rated		Not rated	
25:					
Angle---------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
26:					
Aquic Cryumprepts---	75	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.32
27:					
Ardening------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Seepage	0.50
28:					
Ardenmont-----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.73	Seepage	0.50
		Restricted permeability	0.50	Depth to soft bedrock	0.32
29:					
Ardenmont-----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.73	Seepage	0.50
		Restricted permeability	0.50	Depth to soft bedrock	0.32
30:					
Ardenmont-----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.73	Seepage	0.50
		Restricted permeability	0.50	Depth to soft bedrock	0.32
31:					
Ardenmont-----------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.73	Seepage	0.50
		Restricted permeability	0.50	Depth to soft bedrock	0.32

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
31:					
Swakane	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	0.50
32:					
Ardenvoir	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Content of large stones	0.05
				Depth to hard bedrock	0.05
33:					
Ardenvoir	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Content of large stones	0.05
				Depth to hard bedrock	0.05
34:					
Azwell	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.14	Content of large stones	0.49
Rock outcrop	15	Not rated		Not rated	
35:					
Bagmont	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
36:					
Bigcreek	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Slope	0.32
37:					
Billyridge	75	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
				Slope	0.32
38:					
Billyridge	75	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
39:					
Billyridge	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
40:					
Bisping	85	Somewhat limited		Very limited	
		Restricted permeability	0.50	Slope	1.00
		Slope	0.04	Seepage	0.50
41:					
Bisping	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
42:					
Bisping	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
43:					
Bjork	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
44:					
Bjork	55	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	30	Not rated		Not rated	
45:					
Blag	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
Cle Elum	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	15	Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
46:					
Blag	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
Rock outcrop	30	Not rated		Not rated	
47:					
Blewett	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	
48:					
Borland	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
49:					
Borland	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	
50:					
Brief	85	Not limited		Very limited	
				Seepage	1.00
				Slope	1.00
51:					
Brisky	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
Rock outcrop	20	Not rated		Not rated	
52:					
Burch	85	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Slope	0.92
				Seepage	0.50
53:					
Burnscreek	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.23	Content of large stones	0.14

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54:					
Burrant	85	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Slope	0.92
				Seepage	0.50
55:					
Burrant	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
56:					
Cashmont	80	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.32
57:					
Cashmont	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
58:					
Chapot	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Content of large stones	1.00
		Content of large stones	1.00	Seepage	0.50
59:					
Chinkmin	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
60:					
Chinkmin	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
61:					
Chinkmin	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Altapeak	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.86	Depth to soft bedrock	0.61

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
62:					
Chinkmin------------	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
Altapeak------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.86	Depth to soft bedrock	0.61
63:					
Chiwaukum-----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
64:					
Chiwaukum-----------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.14		
65:					
Chiwaukum-----------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
66:					
Chiwaukum-----------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.24		
67:					
Chiwaukum-----------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Chiwaukum, south----	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
68:					
Chiwaukum-----------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68:					
Chiwaukum, south	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
69:					
Chiwawa	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50		
70:					
Choralmont, till substratum	40	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00		
		Restricted permeability	0.50		
Choralmont	35	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00		
71:					
Choralmont	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
		Slope	1.00		
72:					
Choralmont	85	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00		
73:					
Choralmont	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
		Slope	1.00		
		Restricted permeability	0.50		
74:					
Choralmont	75	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00		
		Restricted permeability	0.50		
75:					
Choralmont	50	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
75:					
Limking	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.78	Depth to hard bedrock	0.42
		Content of large stones	0.03	Content of large stones	0.10
76:					
Chumstick	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Seepage	1.00
		Content of large stones	0.07	Slope	1.00
				Content of large stones	0.64
77:					
Chumstick	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.07	Seepage	1.00
				Content of large stones	0.64
78:					
Chumstick	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.07	Seepage	1.00
				Content of large stones	0.64
79:					
Cle Elum	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
80:					
Cle Elum	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
81:					
Coopmont	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
82:					
Coopmont	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
83:					
Cowiche	45	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Depth to bedrock	0.78	Seepage	0.50
		Restricted permeability	0.50	Depth to soft bedrock	0.42
Cowiche, very deep	40	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
84:					
Cowiche	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.78	Seepage	0.50
		Restricted permeability	0.50	Depth to soft bedrock	0.42
Cowiche, very deep	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
85:					
Cryomont	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.25	Content of large stones	0.76
				Slope	0.08
86:					
Cryomont	75	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Flooding	0.40	Content of large stones	0.86
		Content of large stones	0.29	Flooding	0.40
87:					
Cryomont	40	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.38	Content of large stones	0.98
				Slope	0.08

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
87:					
Cryomont, fan	35	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Flooding	0.40	Content of large stones	0.99
		Content of large stones	0.39	Flooding	0.40
88:					
Culving	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
Rock outcrop	20	Not rated		Not rated	
89:					
Culvop	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
90:					
Devore	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.93	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	15	Not rated		Not rated	
91:					
Dinkelman	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Seepage	0.50
92:					
Dinkelman	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Seepage	0.50
93:					
Dinkelman	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	25	Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
94:					
Dinkels	85	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.30		
95:					
Dinkels	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.30		
96:					
Dinkels	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.30	Seepage	1.00
97:					
Domkey	80	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
		Depth to bedrock	0.94	Slope	1.00
		Restricted permeability	0.50	Depth to soft bedrock	0.84
98:					
Domkey	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.94	Seepage	1.00
		Restricted permeability	0.50	Depth to soft bedrock	0.84
99:					
Domkey	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.94	Seepage	1.00
		Restricted permeability	0.50	Depth to soft bedrock	0.84
McCree	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.92
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Depth to hard bedrock	0.05
100:					
Dragoon	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
101:					
Dragoon	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
102:					
Entiat	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
103:					
Entiat	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
Rock outcrop	25	Not rated		Not rated	
104:					
Entic Haplumbrepts	90	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Content of large stones	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
105:					
Esmeralda	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.73	Content of large stones	1.00
106:					
Esmeralda	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.73	Content of large stones	1.00
Rock outcrop	35	Not rated		Not rated	
107:					
Fears	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	1.00
		Content of large stones	0.25	Content of large stones	0.22

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
108:					
Fears	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	1.00
		Content of large stones	0.25	Content of large stones	0.22
Devore	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.93	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
109:					
Fernow	80	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50		
110:					
Fernow	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
111:					
Fernow	50	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
Serene	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.01	Content of large stones	0.12
112:					
Fluvaquents	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
113:					
Georgecreek	80	Somewhat limited		Very limited	
		Depth to bedrock	0.99	Slope	1.00
		Restricted permeability	0.50	Depth to soft bedrock	0.96
		Slope	0.04	Seepage	0.50
114:					
Georgecreek	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Seepage	0.50
115:					
Georgecreek	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Seepage	0.50
116:					
Georgecreek	50	Somewhat limited		Very limited	
		Depth to bedrock	0.99	Slope	1.00
		Restricted permeability	0.50	Depth to soft bedrock	0.96
		Slope	0.04	Seepage	0.50
Dragoon	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Restricted permeability	0.50	Slope	1.00
		Slope	0.04	Seepage	0.50
117:					
Georgecreek	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.36	Depth to soft bedrock	0.01
Dragoon	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
118:					
Gilpar	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01	Content of large stones	0.49

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
119:					
Gilpar	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01	Content of large stones	0.49
Nimue	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
120:					
Gilpar	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01	Content of large stones	0.49
Nimue	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	20	Not rated		Not rated	
121:					
Gilpar	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01	Content of large stones	0.49
Rock outcrop	25	Not rated		Not rated	
122:					
Glaciers, snowfields	90	Not rated		Not rated	
123:					
Goffpeak	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Seepage	1.00
		Restricted permeability	0.50	Depth to hard bedrock	0.96

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
124:					
Goffpeak------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Seepage	1.00
		Restricted permeability	0.50	Depth to hard bedrock	0.96
Fears---------------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	1.00
		Content of large stones	0.25	Content of large stones	0.22
125:					
Haplocryods, cold---	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
Haplocryods, stony--	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
126:					
Haplocryods---------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.69	Seepage	1.00
				Depth to hard bedrock	0.26
Andic Cryochrepts---	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Content of large stones	0.99
		Content of large stones	0.16	Seepage	0.50
Rock outcrop--------	20	Not rated		Not rated	
127:					
Haploxerolls--------	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50	Content of large stones	0.32
128:					
Haploxerolls--------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Content of large stones	0.32

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
129:					
Humicryods----------	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Seepage	1.00
		Content of large stones	0.17	Slope	1.00
				Content of large stones	0.61
Andic Cryumbrepts---	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01	Content of large stones	0.03
130:					
Humicryods----------	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.17	Seepage	1.00
				Content of large stones	0.61
Andic Cryochrepts---	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Content of large stones	0.99
		Content of large stones	0.16	Seepage	0.50
Rock outcrop--------	20	Not rated		Not rated	
131:					
Humicryods----------	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.17	Seepage	1.00
				Content of large stones	0.61
Andic Cryumbrepts---	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.73	Seepage	1.00
				Depth to hard bedrock	0.32
Rock outcrop--------	15	Not rated		Not rated	
132:					
Hyprairie-----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
133:					
Hyprairie-----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
134:					
Hyprairie-----------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
Oldbutte------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
135:					
Icicle, south-------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.88	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Icicle--------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.96	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
136:					
Icicle--------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.88	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
137:					
Icicle--------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.96	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
138:					
Icicle--------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.96	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
139:					
Icicle	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.79	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
140:					
Icicle	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Depth to bedrock	0.78	Seepage	0.50
		Restricted permeability	0.50	Depth to hard bedrock	0.42
Chumstick	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Content of large stones	0.07	Slope	1.00
				Seepage	1.00
				Content of large stones	0.64
Rock outcrop	25	Not rated		Not rated	
141:					
Icicle	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Depth to bedrock	0.78	Seepage	0.50
		Restricted permeability	0.50	Depth to hard bedrock	0.42
Chumstick	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Content of large stones	0.07	Slope	1.00
				Seepage	1.00
				Content of large stones	0.64
Rock outcrop	25	Not rated		Not rated	
142:					
Inkler	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.96	Depth to hard bedrock	0.88
143:					
Isella	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
143:					
Fernow--------------	35	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50		
144:					
Isella--------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Fernow--------------	35	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
145:					
Isella--------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Nimue---------------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
146:					
Isella--------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Nimue---------------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
147:					
Kingmont------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
148:					
Kladnick------------	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.32	Slope	0.32
				Content of large stones	0.04

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
149:					
Kladnick	75	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
150:					
Kladnick	80	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.85	Slope	1.00
		Slope	0.04	Content of large stones	1.00
151:					
Klapatche	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Content of large stones	0.01		
Altapeak	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.59	Depth to soft bedrock	0.13
152:					
Kloochman	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Seepage	1.00
				Slope	1.00
153:					
Kloochman	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
154:					
Kloochman	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
155:					
Kloochman	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
155:					
Inkler	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.96	Depth to hard bedrock	0.88
156:					
Kloochman	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
Inkler	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.96	Depth to hard bedrock	0.88
Rock outcrop	15	Not rated		Not rated	
157:					
Kloochman	70	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
Rock outcrop	15	Not rated		Not rated	
158:					
Limking	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.36	Depth to hard bedrock	0.01
159:					
Limking	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.36	Depth to hard bedrock	0.01
Coopmont	35	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
160:					
Limking	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.36	Depth to hard bedrock	0.01

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
160:					
Coopmont	35	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
161:					
Limking	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.36	Depth to hard bedrock	0.01
Coopmont	25	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
Rock outcrop	20	Not rated		Not rated	
162:					
Limking	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.36	Depth to hard bedrock	0.01
Rock outcrop	20	Not rated		Not rated	
163:					
Line	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
164:					
Line	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
165:					
Line	85	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
166:					
Line	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
166:					
Vabbing	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
167:					
Loneridge	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Content of large stones	0.26
		Content of large stones	0.13		
168:					
Loneridge	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.50
		Content of large stones	0.04	Content of large stones	0.22
169:					
Loneridge	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Content of large stones	0.92
		Content of large stones	0.26		
170:					
Macreeing	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.86	Content of large stones	0.86
		Restricted permeability	0.50	Depth to hard bedrock	0.61
		Content of large stones	0.33	Seepage	0.50
171:					
Macreeing	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.86	Content of large stones	0.86
		Restricted permeability	0.50	Depth to hard bedrock	0.61
		Content of large stones	0.33	Seepage	0.50
172:					
Macreeing	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.86	Content of large stones	0.86
		Restricted permeability	0.50	Depth to hard bedrock	0.61
		Content of large stones	0.33	Seepage	0.50
Rock outcrop	30	Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
173:					
Mansonia	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	1.00
174:					
Mansonia	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.78	Seepage	0.50
		Restricted permeability	0.50	Depth to hard bedrock	0.42
Swakane	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	0.50
Rock outcrop	20	Not rated		Not rated	
175:					
Mansonia	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.78	Seepage	0.50
		Restricted permeability	0.50	Depth to hard bedrock	0.42
Swakane	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	1.00
Rock outcrop	30	Not rated		Not rated	
176:					
Marmont	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	0.04	Slope	1.00
177:					
Marmont	85	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
178:					
Marmont	85	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
179:					
McCree	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.92
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Depth to hard bedrock	0.05
180:					
McCree	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.92
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Depth to hard bedrock	0.05
181:					
McCree	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.92
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Depth to hard bedrock	0.05
182:					
McCree	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.92
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Depth to hard bedrock	0.05
Palmich	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
183:					
McCree	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.92
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Depth to hard bedrock	0.05
Palmont	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
Rock outcrop	15	Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
184:					
McCree	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.92
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Depth to hard bedrock	0.05
Rock outcrop	25	Not rated		Not rated	
185:					
Mippon	75	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Content of large stones	0.01		
186:					
Mippon	75	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Content of large stones	0.05	Content of large stones	0.01
187:					
Mippon	75	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Content of large stones	0.42	Content of large stones	0.96
188:					
Morical	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Restricted permeability	0.50	Slope	1.00
		Slope	0.04	Seepage	0.50
189:					
Morical	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
190:					
Morical	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
191:					
Morical	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Dragoon	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
192:					
Morical	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Dragoon	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
193:					
Morical	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Dragoon	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
194:					
Morical	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Dragoon	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
195:					
Mountaineer	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
196:					
Mountaineer	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	20	Not rated		Not rated	
197:					
Mountaineer	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Tillicum	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Seepage	1.00
		Restricted permeability	0.50	Depth to hard bedrock	0.96
Rock outcrop	15	Not rated		Not rated	
198:					
Nahahum	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
199:					
Nahahum	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
Taneum	40	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	0.01
		Depth to bedrock	0.36		
200:					
Nard	75	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
201:					
Nard	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
202:					
Nard	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
Blag	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
203:					
Nard	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
Brisky	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
204:					
Nardine	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.32
205:					
Nardmont	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
206:					
Nardmont	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
207:					
Natapoc	80	Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.34		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
208:					
Natapoc-------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	1.00
		Content of large stones	0.34		
209:					
Natapoc-------------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	1.00
		Content of large stones	0.34		
Thow----------------	30	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
210:					
Naxing--------------	75	Very limited		Very limited	
		Content of large stones	1.00	Content of large stones	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
211:					
Naxing--------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
212:					
Newbell-------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
213:					
Nimue---------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
214:					
Nimue---------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
215:					
Nimue	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	20	Not rated		Not rated	
216:					
Nimue	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Nimue, dry	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
217:					
Nimue, dry	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.60	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Nimue	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.53	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	15	Not rated		Not rated	
218:					
Oldbutte	85	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.92
				Seepage	0.50
219:					
Oldbutte	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
220:					
Palmich	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
221:					
Palmich	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
222:					
Palmich	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
223:					
Palmich	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
McCree	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.92
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Depth to hard bedrock	0.05
224:					
Palmich	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
McCree	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.89	Content of large stones	0.92
		Restricted permeability	0.50	Seepage	0.50
		Depth to bedrock	0.47	Depth to hard bedrock	0.05
Rock outcrop	20	Not rated		Not rated	
225:					
Palmich	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	20	Not rated		Not rated	
226:					
Palmont	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
227:					
Palmont	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
228:					
Palmont	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
229:					
Palmont	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
Rock outcrop	30	Not rated		Not rated	
230:					
Ramparter	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
231:					
Ramparter	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
		Slope	1.00		
232:					
Ramparter	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
233:					
Ramparter	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
234:					
Ramparter	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
		Slope	1.00		
		Restricted permeability	0.50		
235:					
Ramparter	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
236:					
Ramparter	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
Wilma	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	1.00
237:					
Reggad	75	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Content of large stones	1.00	Seepage	1.00
238:					
Reggad	40	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Content of large stones	1.00	Seepage	1.00
Serene	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.01	Content of large stones	0.12
239:					
Rock outcrop	90	Not rated		Not rated	
240:					
Rock outcrop	50	Not rated		Not rated	
Blewett	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
241:					
Rock outcrop	50	Not rated		Not rated	
Borland	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
242:					
Rock outcrop	40	Not rated		Not rated	
Chumstick	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.07	Seepage	1.00
				Content of large stones	0.64
Icicle	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Depth to bedrock	0.78	Seepage	0.50
		Restricted permeability	0.50	Depth to hard bedrock	0.42
243:					
Rock outcrop	40	Not rated		Not rated	
Chumstick	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.07	Seepage	1.00
				Content of large stones	0.64
Icicle	15	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Depth to bedrock	0.78	Seepage	0.50
		Restricted permeability	0.50	Depth to hard bedrock	0.42
244:					
Rock outcrop	60	Not rated		Not rated	
Rubble land	20	Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated	
245:					
Rock outcrop	35	Not rated		Not rated	
Rubble land	25	Not rated		Not rated	
Serene	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.01	Content of large stones	0.12

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
246:					
Rubble land---------	65	Not rated		Not rated	
Rock outcrop--------	20	Not rated		Not rated	
247:					
Safety--------------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
248:					
Safety--------------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
249:					
Safety--------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
250:					
Safety--------------	70	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop--------	15	Not rated		Not rated	
251:					
Saska---------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.45		
252:					
Saska---------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.45		
253:					
Saska---------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
254:					
Saska	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
255:					
Saska	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.42		
256:					
Saska	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.42		
257:					
Saska	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.45		
Rock outcrop	20	Not rated		Not rated	
258:					
Saska	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.45		
Saska, bouldery	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.42		
259:					
Saska, south	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
259:					
Saska	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.42		
260:					
Saska	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.45		
Saska, bouldery	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.42		
261:					
Saska	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.45		
Saska, bouldery	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.42		
Rock outcrop	15	Not rated		Not rated	
262:					
Saska, south	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Saska	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.45		
Rock outcrop	15	Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
263:					
Saydab	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Content of large stones	1.00
		Content of large stones	0.87	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
			0.50		
264:					
Scotties	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.96	Depth to hard bedrock	0.88
		Restricted permeability	0.50	Seepage	0.50
265:					
Serene	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.01	Content of large stones	0.12
266:					
Serene	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Content of large stones	0.01	Content of large stones	0.12
Rock outcrop	25	Not rated		Not rated	
267:					
Serpen	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	0.61
		Depth to bedrock	0.86		
268:					
Serpen	80	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	0.61
		Depth to bedrock	0.86		
269:					
Shadypass	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
270:					
Shamel	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
271:					
Shamel	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
272:					
Shamel	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	20	Not rated		Not rated	
273:					
Shaser	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
Blewett	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
274:					
Shaser	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
Brisky	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
275:					
Shaser	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
Chapot	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
276:					
Skipeak	80	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
277:					
Skipeak	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
Line	35	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
278:					
Soda	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.03		
279:					
Soda	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.19		
280:					
Soda	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.18		
281:					
Soda	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01		
282:					
Soda	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01		
283:					
Soda	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01		
Rock outcrop	20	Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
284:					
Soda----------------	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.18		
Rock outcrop--------	20	Not rated		Not rated	
285:					
Soda----------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.03		
Soda, cold----------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.18		
286:					
Soda----------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.03		
Soda, cold----------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.18		
287:					
Soda----------------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.18		
Soda, cold----------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.03		
Rock outcrop--------	15	Not rated		Not rated	

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
288:					
Sodacreek-----------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
289:					
Sodacreek-----------	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop--------	15	Not rated		Not rated	
290:					
Spodic Vitrixerands	60	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	1.00
Saska---------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.45		
291:					
Spodic Vitrixerands	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	1.00
Saska---------------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.45		
292:					
Stemilt-------------	80	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.50
		Content of large stones	0.85	Content of large stones	0.09

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
293:					
Stemilt	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.50
		Content of large stones	0.85	Content of large stones	0.09
294:					
Surgh	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.91	Depth to hard bedrock	0.77
		Restricted permeability	0.50	Seepage	0.50
295:					
Surgh	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.91	Depth to hard bedrock	0.77
		Restricted permeability	0.50	Seepage	0.50
296:					
Surgh	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.91	Depth to hard bedrock	0.77
		Restricted permeability	0.50	Seepage	0.50
297:					
Surgh	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.77	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
Wedge	40	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
298:					
Swakane	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01 0.01	Seepage	0.50
299:					
Swakane	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
300:					
Swakane-------------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	1.00
				Content of large stones	0.01
Rock outcrop--------	25	Not rated		Not rated	
301:					
Swakane-------------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	0.50
Rock outcrop--------	35	Not rated		Not rated	
302:					
Switchback----------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
303:					
Switchback----------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
304:					
Switchback----------	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
305:					
Taneum--------------	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	0.01
		Depth to bedrock	0.36		
306:					
Thow----------------	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
307:					
Thow----------------	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
308:					
Thow----------------	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
309:					
Thow----------------	30	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
Domkey--------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.94	Seepage	1.00
		Restricted permeability	0.50	Depth to soft bedrock	0.84
Rock outcrop--------	20	Not rated		Not rated	
310:					
Thowson-------------	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Slope	0.32
311:					
Thowson-------------	85	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
		Restricted permeability	0.50		
312:					
Thowson-------------	85	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
313:					
Thowson	85	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
314:					
Thowson	75	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
315:					
Thowson	60	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
Rock outcrop	15	Not rated		Not rated	
316:					
Thowson	60	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
Rock outcrop	15	Not rated		Not rated	
317:					
Thowson	50	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
Rock outcrop	30	Not rated		Not rated	
318:					
Thowson, stony	30	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
318:					
Thowson-------------	30	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
Rock outcrop--------	15	Not rated		Not rated	
319:					
Tillicum------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
				Depth to hard bedrock	1.00
320:					
Tillicum------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Seepage	1.00
		Restricted permeability	0.50	Depth to hard bedrock	0.96
321:					
Tillicum------------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Seepage	1.00
		Restricted permeability	0.50	Depth to hard bedrock	0.96
322:					
Tillmont------------	75	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Depth to bedrock	0.91	Depth to hard bedrock	0.77
		Restricted permeability	0.50		
323:					
Tillmont------------	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.91	Depth to hard bedrock	0.77
		Restricted permeability	0.50		
324:					
Tillmont------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.91	Depth to hard bedrock	0.77
		Restricted permeability	0.50		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
324:					
Inkler	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.96	Depth to hard bedrock	0.88
325:					
Tiptop	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Content of large stones	0.70
		Content of large stones	0.14	Seepage	0.50
326:					
Tiptop	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Content of large stones	0.70
		Content of large stones	0.14	Seepage	0.50
Naxing	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
		Restricted permeability	0.50	Seepage	0.50
327:					
Totem	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50		
328:					
Totem	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50		
329:					
Totem	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50		

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
330:					
Totem	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50		
Chiwaukum	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.14		
331:					
Treen	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
332:					
Treen	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
Klapatche	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Content of large stones	0.01		
333:					
Tronsen	80	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.50
				Content of large stones	0.02
334:					
Tronsen	80	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.50
				Content of large stones	0.02
335:					
Tyee	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
336:					
Tyee	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
337:					
Tyee	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
338:					
Tyee	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
Bisping	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
339:					
Typic Cryaquands	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.08
340:					
Vabbing	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
341:					
Vabbing	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
342:					
Vabbing	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Gilpar	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
		Content of large stones	0.01	Content of large stones	0.49

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
343:					
Vabbing-------------	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop--------	20	Not rated		Not rated	
344:					
Vabus---------------	75	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Seepage	1.00
		Content of large stones	0.01	Slope	1.00
				Content of large stones	0.03
345:					
Vabus---------------	75	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Content of large stones	0.01	Seepage	1.00
				Content of large stones	0.03
346:					
Vabus---------------	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Seepage	1.00
		Content of large stones	0.01	Slope	1.00
				Content of large stones	0.03
Chinkmin------------	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
347:					
Vabus---------------	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Content of large stones	0.01	Seepage	1.00
				Content of large stones	0.03
Chinkmin------------	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
348:					
Varelum	85	Somewhat limited		Somewhat limited	
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Slope	0.92
				Seepage	0.50
349:					
Varelum	85	Somewhat limited		Very limited	
		Depth to bedrock	0.99	Slope	1.00
		Slope	0.63	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Seepage	0.50
350:					
Varelum	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Seepage	0.50
351:					
Varelum	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Restricted permeability	0.50	Seepage	0.50
352:					
Vitricryands	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
353:					
Vitricryands	45	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Rock outcrop	30	Not rated		Not rated	
354:					
Wagberg	80	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
		Content of large stones	0.02	Slope	1.00
				Content of large stones	0.02
355:					
Wagberg	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.02	Seepage	1.00
				Content of large stones	0.02

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
356:					
Wagberg	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	1.00
Wagberg, south	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.05	Seepage	1.00
				Content of large stones	0.18
357:					
Wagberg	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Content of large stones	0.02	Seepage	1.00
				Content of large stones	0.02
Swakane	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	0.50
Rock outcrop	20	Not rated		Not rated	
358:					
Wedge	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
359:					
Wedge	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.50		
360:					
Wedge	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
361:					
Wedge	80	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
362:					
Wedge	60	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
362:					
Typic Cryaquands----	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
363:					
Wedge---------------	50	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00		
		Restricted permeability	0.50		
Wedge, cold---------	30	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00		
364:					
Wedgemont-----------	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50		
365:					
Wilma---------------	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Restricted permeability	0.50	Slope	1.00
				Seepage	1.00
366:					
Wilma---------------	75	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Restricted permeability	0.50	Slope	1.00
				Seepage	1.00
Rock outcrop--------	15	Not rated		Not rated	
367:					
Yaxing--------------	80	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
368:					
Yaxing--------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 11a.--Sanitary Facilities (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
369:					
Yaxon	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.63		
370:					
Yaxon	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
371:					
Yaxon	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
372:					
Yaxon	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
373:					
Yaxon	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
374:					
Zeb	75	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
				Slope	1.00
W:					
Water	100	Not rated		Not rated	

Table 11b.--Sanitary Facilities (Part II)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents---	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Too sandy	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00				
2:							
Almac---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.01
3:							
Almac---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.01
4:							
Almac---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.01
5:							
Almac---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.04
Azwell--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.14			Content of large stones	0.14
6:							
Almac---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.04
Azwell--------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.14			Content of large stones	0.14
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7:							
Almac	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.04
Rock outcrop	25	Not rated		Not rated		Not rated	
8:							
Alnult	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
						Gravel content	0.13
Reggad	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Content of large stones	1.00			Content of large stones	1.00
9:							
Altapeak	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Slope	1.00	Slope	1.00
		Too sandy	1.00	Depth to bedrock	0.13	Gravel content	0.83
		Slope	1.00			Too sandy	0.50
						Depth to bedrock	0.13
10:							
Altapeak	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.13	Gravel content	0.83
		Too sandy	1.00			Too sandy	0.50
						Depth to bedrock	0.13
11:							
Altapeak	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.13	Gravel content	0.83
		Too sandy	1.00			Too sandy	0.50
						Depth to bedrock	0.13
12:							
Altapeak	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.61	Gravel content	0.89
		Too sandy	1.00			Depth to bedrock	0.61
						Too sandy	0.50
13:							
Altapeak	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00	Depth to bedrock	0.61	Gravel content	0.83
		Seepage	1.00			Depth to bedrock	0.61
						Too sandy	0.50

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
13:							
Alnult	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
						Gravel content	0.13
14:							
Altapeak	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.61	Gravel content	0.89
		Too sandy	1.00			Depth to bedrock	0.61
						Too sandy	0.50
Alnult	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
						Gravel content	0.13
15:							
Altapeak	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.61	Gravel content	0.89
		Too sandy	1.00			Depth to bedrock	0.61
						Too sandy	0.50
Alnult	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
						Gravel content	0.13
16:							
Anatone	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.74			Content of large stones	0.74
Blewett	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	1.00
17:							
Anatone	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.74			Content of large stones	0.74
Rock outcrop	15	Not rated		Not rated		Not rated	

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
18:							
Andic Cryochrepts---	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.13			Content of large stones	0.13
19:							
Andic Cryumbrepts---	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.48
20:							
Andic Cryumbrepts---	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.01			Content of large stones	0.01
21:							
Andic Cryumbrepts---	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.01			Content of large stones	0.01
Haplocryods---------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18			Content of large stones	0.18
Rock outcrop--------	15	Not rated		Not rated		Not rated	
22:							
Andic Cryumbrepts---	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.01			Content of large stones	0.01
Rock outcrop--------	20	Not rated		Not rated		Not rated	
23:							
Andic Cryumbrepts---	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.01
Rock outcrop--------	30	Not rated		Not rated		Not rated	
24:							
Andic Haplumbrepts--	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.05
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25:							
Angle---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	1.00			Too sandy	0.50
26:							
Aquic Cryumprepts---	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Too sandy	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00			Gravel content	0.05
27:							
Ardening------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
28:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Too sandy	1.00	Depth to bedrock	0.32	Too sandy	0.50
		Slope	1.00			Depth to bedrock	0.32
29:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.32	Too sandy	0.50
		Too sandy	1.00			Depth to bedrock	0.32
30:							
Ardenmont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.32	Too sandy	0.50
		Too sandy	1.00			Depth to bedrock	0.32
31:							
Ardenmont-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.32	Too sandy	0.50
		Too sandy	1.00			Depth to bedrock	0.32
Swakane-------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.91
32:							
Ardenvoir-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Gravel content	1.00
						Depth to bedrock	0.05
33:							
Ardenvoir-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Gravel content	1.00
						Depth to bedrock	0.05

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
34:							
Azwell	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.14			Content of large stones	0.14
Rock outcrop	15	Not rated		Not rated		Not rated	
35:							
Bagmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.94
36:							
Bigcreek	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
						Gravel content	1.00
37:							
Billyridge	75	Not limited		Not limited		Not limited	
38:							
Billyridge	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
39:							
Billyridge	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
40:							
Bisping	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
						Gravel content	0.01
41:							
Bisping	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.01
42:							
Bisping	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.01
43:							
Bjork	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00			Slope	1.00
44:							
Bjork	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00			Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
45:							
Blag----------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
Cle Elum------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
46:							
Blag----------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
Rock outcrop--------	30	Not rated		Not rated		Not rated	
47:							
Blewett-------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	1.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
48:							
Borland-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
49:							
Borland-------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Rock outcrop--------	20	Not rated		Not rated		Not rated	
50:							
Brief---------------	85	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Gravel content	0.86
						Seepage	0.50
51:							
Brisky--------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.79
Rock outcrop--------	20	Not rated		Not rated		Not rated	
52:							
Burch---------------	85	Not limited		Not limited		Not limited	

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
53:							
Burnscreek----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.44			Content of large stones	0.44
						Gravel content	0.04
54:							
Burrant-------------	85	Not limited		Not limited		Not limited	
55:							
Burrant-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
56:							
Cashmont------------	80	Very limited		Not limited		Very limited	
		Too sandy	1.00			Seepage	1.00
						Too sandy	0.50
						Gravel content	0.25
57:							
Cashmont------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Seepage	0.50
						Gravel content	0.22
58:							
Chapot--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
		Too clayey	0.50			Too clayey	0.50
59:							
Chinkmin------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Too sandy	1.00	Slope	1.00	Depth to saturated zone	0.62
		Slope	1.00			Too sandy	0.50
						Gravel content	0.07
60:							
Chinkmin------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.62
		Too sandy	1.00			Too sandy	0.50
						Gravel content	0.07
61:							
Chinkmin------------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Too sandy	1.00	Slope	1.00	Depth to saturated zone	0.62
		Slope	1.00			Too sandy	0.50
						Gravel content	0.07

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61:							
Altapeak------------	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Slope	1.00	Slope	1.00
		Too sandy	1.00	Depth to bedrock	0.61	Gravel content	0.89
		Slope	1.00			Depth to bedrock	0.61
						Too sandy	0.50
62:							
Chinkmin------------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.62
		Too sandy	1.00			Too sandy	0.50
						Gravel content	0.07
Altapeak------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.61	Gravel content	0.89
		Too sandy	1.00			Depth to bedrock	0.61
						Too sandy	0.50
63:							
Chiwaukum-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.11			Content of large stones	0.11
64:							
Chiwaukum-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.72			Content of large stones	0.72
65:							
Chiwaukum-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17			Content of large stones	0.17
66:							
Chiwaukum-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79			Content of large stones	0.79
67:							
Chiwaukum-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.11			Content of large stones	0.11
Chiwaukum, south----	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17			Content of large stones	0.17

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68:							
Chiwaukum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.11			Content of large stones	0.11
Chiwaukum, south	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17			Content of large stones	0.17
69:							
Chiwawa	85	Very limited		Not limited		Somewhat limited	
		Seepage	1.00			Gravel content	0.73
70:							
Choralmont, till substratum	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
						Too sandy	0.50
Choralmont	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
71:							
Choralmont	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
						Slope	1.00
72:							
Choralmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
73:							
Choralmont	85	Very limited		Very limited		Very limited	
		Too sandy	1.00	Seepage	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
						Slope	1.00
						Too sandy	0.50
74:							
Choralmont	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
						Too sandy	0.50
75:							
Choralmont	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75:							
Limking	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.42	Gravel content	0.74
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.04			Depth to bedrock	0.42
76:							
Chumstick	75	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
		Content of large stones	0.07			Gravel content	0.09
						Content of large stones	0.07
77:							
Chumstick	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
		Content of large stones	0.07			Gravel content	0.09
						Content of large stones	0.07
78:							
Chumstick	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
		Content of large stones	0.07			Gravel content	0.09
						Content of large stones	0.07
79:							
Cle Elum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
80:							
Cle Elum	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
81:							
Coopmont	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Slope	1.00
		Slope	1.00			Gravel content	0.64
82:							
Coopmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.64

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
83:							
Cowiche	45	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Slope	0.96	Slope	0.96
		Slope	0.96			Depth to bedrock	0.42
Cowiche, very deep	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
84:							
Cowiche	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00			Depth to bedrock	0.42
Cowiche, very deep	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
85:							
Cryomont	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00			Gravel content	0.82
		Content of large stones	0.34			Content of large stones	0.34
86:							
Cryomont	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Slope	1.00	Seepage	1.00
		Slope	1.00	Flooding	0.40	Slope	1.00
		Flooding	0.40			Gravel content	0.83
		Content of large stones	0.37			Content of large stones	0.37
87:							
Cryomont	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00			Gravel content	0.80
		Content of large stones	0.43			Content of large stones	0.43
Cryomont, fan	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Slope	1.00	Seepage	1.00
		Slope	1.00	Flooding	0.40	Slope	1.00
		Content of large stones	0.44			Gravel content	0.81
		Flooding	0.40			Content of large stones	0.44
88:							
Culving	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.97
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89:							
Culvop--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.98
90:							
Devore--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.93			Content of large stones	0.93
						Gravel content	0.13
Rock outcrop--------	15	Not rated		Not rated		Not rated	
91:							
Dinkelman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
						Gravel content	0.04
92:							
Dinkelman-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
						Gravel content	0.04
93:							
Dinkelman-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
						Gravel content	0.04
Rock outcrop--------	25	Not rated		Not rated		Not rated	
94:							
Dinkels-------------	85	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Slope	0.63	Slope	0.63
		Slope	0.63				
95:							
Dinkels-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00				
96:							
Dinkels-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.50
		Seepage	1.00			Gravel content	0.08
97:							
Domkey--------------	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00	Depth to bedrock	0.84
		Seepage	1.00	Depth to bedrock	0.84	Gravel content	0.01

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
98:							
Domkey--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.84
		Seepage	1.00	Depth to bedrock	0.84	Gravel content	0.01
99:							
Domkey--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.84
		Seepage	1.00	Depth to bedrock	0.84	Gravel content	0.01
McCree--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Content of large stones	0.98
		Content of large stones	0.98			Depth to bedrock	0.05
100:							
Dragoon-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
101:							
Dragoon-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
102:							
Entiat--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00			Slope	1.00
						Gravel content	1.00
						Seepage	0.50
103:							
Entiat--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00			Slope	1.00
						Gravel content	1.00
						Seepage	0.50
Rock outcrop--------	25	Not rated		Not rated		Not rated	
104:							
Entic Haplumbrepts--	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00			Too sandy	1.00
		Content of large stones	1.00			Content of large stones	1.00
105:							
Esmeralda-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Content of large stones	0.81			Content of large stones	0.81
						Gravel content	0.13

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106:							
Esmeralda-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Content of large stones	0.81			Content of large stones	0.81
						Gravel content	0.13
Rock outcrop--------	35	Not rated		Not rated		Not rated	
107:							
Fears---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.65
		Content of large stones	0.46			Seepage	0.50
						Content of large stones	0.46
108:							
Fears---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.65
		Content of large stones	0.46			Seepage	0.50
						Content of large stones	0.46
Devore--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.93			Content of large stones	0.93
						Gravel content	0.13
109:							
Fernow--------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Gravel content	1.00
		Slope	1.00	Seepage	1.00	Slope	1.00
						Seepage	0.50
110:							
Fernow--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
						Seepage	0.50
111:							
Fernow--------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
						Seepage	0.50
Serene--------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Gravel content	0.08

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
112:							
Fluvaquents	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Too sandy	1.00	Seepage	1.00	Seepage	0.21
		Seepage	1.00				
113:							
Georgecreek	80	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
		Slope	0.04	Slope	0.04	Slope	0.04
114:							
Georgecreek	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
115:							
Georgecreek	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
116:							
Georgecreek	50	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
		Slope	0.04	Slope	0.04	Slope	0.04
Dragoon	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.04	Slope	0.04	Slope	0.04
117:							
Georgecreek	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.01	Depth to bedrock	0.01
Dragoon	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
118:							
Gilpar	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01			Gravel content	0.78
						Content of large stones	0.01
119:							
Gilpar	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01			Gravel content	0.78
						Content of large stones	0.01
Nimue	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.58			Content of large stones	0.58
						Gravel content	0.03

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
120:							
Gilpar--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01			Gravel content	0.78
						Content of large stones	0.01
Nimue---------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
						Gravel content	0.05
Rock outcrop--------	20	Not rated		Not rated		Not rated	
121:							
Gilpar--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01			Gravel content	0.78
						Content of large stones	0.01
Rock outcrop--------	25	Not rated		Not rated		Not rated	
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.96
		Seepage	1.00	Depth to bedrock	0.96	Gravel content	0.94
						Seepage	0.50
124:							
Goffpeak------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.96
		Seepage	1.00	Depth to bedrock	0.96	Gravel content	0.94
						Seepage	0.50
Fears---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.65
		Content of large stones	0.46			Seepage	0.50
						Content of large stones	0.46
125:							
Haplocryods, cold---	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.21
						Gravel content	0.18
Haplocryods, stony--	30	Very limited		Very limited		Very limited	
		Slope	1.00	Stony	1.00	Slope	1.00
		Content of large stones	0.23			Content of large stones	0.23

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
126:							
Haplocryods----------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00	Gravel content	0.77
		Seepage	1.00	Depth to bedrock	0.26	Depth to bedrock	0.26
						Seepage	0.21
Andic Cryochrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.13			Content of large stones	0.13
Rock outcrop--------	20	Not rated		Not rated		Not rated	
127:							
Haploxerolls--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50
		Content of large stones	0.12			Gravel content	0.18
						Content of large stones	0.12
128:							
Haploxerolls--------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50
		Content of large stones	0.12			Gravel content	0.18
						Content of large stones	0.12
129:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Content of large stones	0.84
		Content of large stones	0.84			Seepage	0.50
		Too sandy	0.50			Too sandy	0.50
Andic Cryumbrepts---	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02			Gravel content	0.61
						Content of large stones	0.02
130:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Content of large stones	0.84
		Content of large stones	0.84			Seepage	0.50
		Too sandy	0.50			Too sandy	0.50
Andic Cryochrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.13			Content of large stones	0.13

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
130:							
Rock outcrop--------	20	Not rated		Not rated		Not rated	
131:							
Humicryods----------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Content of large stones	0.84
		Content of large stones	0.84			Seepage	0.50
		Too sandy	0.50			Too sandy	0.50
Andic Cryumbrepts---	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.50
		Seepage	1.00	Depth to bedrock	0.32	Gravel content	0.40
						Depth to bedrock	0.32
Rock outcrop--------	15	Not rated		Not rated		Not rated	
132:							
Hyprairie-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
133:							
Hyprairie-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
134:							
Hyprairie-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Oldbutte------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
135:							
Icicle, south-------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.98			Content of large stones	0.98
Icicle--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
136:							
Icicle--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.98			Content of large stones	0.98
137:							
Icicle--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
138:							
Icicle	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
139:							
Icicle	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.96			Content of large stones	0.96
140:							
Icicle	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.42	Content of large stones	1.00
		Content of large stones	1.00				
						Depth to bedrock	0.42
Chumstick	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
		Content of large stones	0.07			Gravel content	0.09
						Content of large stones	0.07
Rock outcrop	25	Not rated		Not rated		Not rated	
141:							
Icicle	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.42	Content of large stones	1.00
		Content of large stones	1.00				
						Depth to bedrock	0.42
Chumstick	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
		Content of large stones	0.07			Gravel content	0.09
						Content of large stones	0.07
Rock outcrop	25	Not rated		Not rated		Not rated	
142:							
Inkler	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.88	Gravel content	1.00
						Depth to bedrock	0.88
143:							
Isella	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
143:							
Fernow--------------	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Gravel content	1.00
		Slope	1.00	Seepage	1.00	Slope	1.00
						Seepage	0.50
144:							
Isella--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fernow--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	1.00
						Seepage	0.50
145:							
Isella--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Nimue---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.58			Content of large stones	0.58
						Gravel content	0.03
146:							
Isella--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Nimue---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
						Gravel content	0.05
147:							
Kingmont------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Gravel content	0.99
						Too clayey	0.50
148:							
Kladnick------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
		Content of large stones	0.69			Content of large stones	0.69
						Gravel content	0.24
149:							
Kladnick------------	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00	Slope	1.00	Slope	1.00
		Slope	1.00			Gravel content	0.88
		Content of large stones	0.01			Too sandy	0.50
						Content of large stones	0.01

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
150:							
Kladnick	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Slope	0.04	Seepage	1.00
		Content of large stones	0.94			Content of large stones	0.94
		Slope	0.04			Gravel content	0.56
						Slope	0.04
151:							
Klapatche	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Gravel content	0.26
Altapeak	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.13	Gravel content	0.83
		Too sandy	1.00			Too sandy	0.50
						Depth to bedrock	0.13
152:							
Kloochman	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.31
153:							
Kloochman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.31
154:							
Kloochman	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.31
155:							
Kloochman	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.31
Inkler	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.88	Gravel content	1.00
						Depth to bedrock	0.88

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
156:							
Kloochman-----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.20
Inkler--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.88	Gravel content	1.00
						Depth to bedrock	0.88
Rock outcrop--------	15	Not rated		Not rated		Not rated	
157:							
Kloochman-----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.20
Rock outcrop--------	15	Not rated		Not rated		Not rated	
158:							
Limking-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.01	Gravel content	0.68
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Depth to bedrock	0.01
159:							
Limking-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.01	Gravel content	0.68
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Depth to bedrock	0.01
Coopmont------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.64
160:							
Limking-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.01	Gravel content	0.68
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Depth to bedrock	0.01
Coopmont------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.64

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
161:							
Limking	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.01	Gravel content	0.68
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Depth to bedrock	0.01
Coopmont	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.64
Rock outcrop	20	Not rated		Not rated		Not rated	
162:							
Limking	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.01	Gravel content	0.68
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Depth to bedrock	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	
163:							
Line	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00	Slope	1.00	Slope	1.00
		Slope	1.00			Gravel content	0.94
		Content of large stones	0.01			Too sandy	0.50
						Content of large stones	0.01
164:							
Line	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Slope	1.00	Seepage	1.00
		Slope	1.00			Slope	1.00
						Gravel content	0.97
165:							
Line	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
						Gravel content	1.00
166:							
Line	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Slope	1.00	Seepage	1.00
		Slope	1.00			Slope	1.00
						Gravel content	0.97
Vabbing	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.99

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
167:							
Loneridge-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
		Content of large stones	0.34			Content of large stones	0.34
						Gravel content	0.15
168:							
Loneridge-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
		Content of large stones	0.12			Gravel content	0.13
						Content of large stones	0.12
169:							
Loneridge-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
		Content of large stones	0.30			Gravel content	0.36
						Content of large stones	0.30
170:							
Macreeing-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.61	Depth to bedrock	0.61
		Content of large stones	0.39			Content of large stones	0.39
						Gravel content	0.08
171:							
Macreeing-----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.61	Depth to bedrock	0.61
		Content of large stones	0.39			Content of large stones	0.39
						Gravel content	0.08
172:							
Macreeing-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.61	Depth to bedrock	0.61
		Content of large stones	0.39			Content of large stones	0.39
						Gravel content	0.08
Rock outcrop--------	30	Not rated		Not rated		Not rated	
173:							
Mansonia------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00				
174:							
Mansonia------------	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.42	Depth to bedrock	0.42
						Gravel content	0.38

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
174:							
Swakane	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.91
Rock outcrop	20	Not rated		Not rated		Not rated	
175:							
Mansonia	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.42	Depth to bedrock	0.42
						Gravel content	0.38
Swakane	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.67
						Seepage	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
176:							
Marmont	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Slope	0.04	Seepage	1.00
		Slope	0.04			Gravel content	1.00
						Slope	0.04
177:							
Marmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
						Gravel content	1.00
178:							
Marmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
						Gravel content	1.00
179:							
McCree	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.05	Content of large stones	0.98
		Content of large stones	0,98			Depth to bedrock	0.05
180:							
McCree	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Content of large stones	0.98
		Content of large stones	0.98			Depth to bedrock	0.05

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
181:							
McCree--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Content of large stones	0.98
		Content of large stones	0.98			Depth to bedrock	0.05
182:							
McCree--------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Content of large stones	0.98
		Content of large stones	0.98			Depth to bedrock	0.05
Palmich-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
183:							
McCree--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Content of large stones	0.98
		Content of large stones	0.98			Depth to bedrock	0.05
Palmont-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	1.00	Seepage	1.00	Gravel content	0.86
		Seepage	1.00			Seepage	0.50
						Too sandy	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
184:							
McCree--------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Content of large stones	0.98
		Content of large stones	0.98			Depth to bedrock	0.05
Rock outcrop--------	25	Not rated		Not rated		Not rated	
185:							
Mippon--------------	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.84
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.08			Content of large stones	0.08

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
186:							
Mippon	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.93
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.16			Content of large stones	0.16
187:							
Mippon	75	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00	Gravel content	0.72
		Too sandy	1.00			Content of large stones	0.51
		Content of large stones	0.51			Too sandy	0.50
188:							
Morical	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.04	Slope	0.04	Slope	0.04
189:							
Morical	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
190:							
Morical	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
191:							
Morical	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
Dragoon	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
192:							
Morical	65	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Dragoon	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
193:							
Morical	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
193:							
Dragoon-------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
194:							
Morical-------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
Dragoon-------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
195:							
Mountaineer---------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
196:							
Mountaineer---------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
197:							
Mountaineer---------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
Tillicum------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.96
		Seepage	1.00	Depth to bedrock	0.96	Seepage	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
198:							
Nahahum-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
199:							
Nahahum-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Taneum--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.01	Too clayey	0.50
		Too clayey	0.50			Depth to bedrock	0.01

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
200:							
Nard----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
201:							
Nard----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
202:							
Nard----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Blag----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
203:							
Nard----------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Brisky--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.79
204:							
Nardine-------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
205:							
Nardmont------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
206:							
Nardmont------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
207:							
Natapoc-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79			Content of large stones	0.79
208:							
Natapoc-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79			Content of large stones	0.79
209:							
Natapoc-------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79			Content of large stones	0.79

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
209:							
Thow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.34
210:							
Naxing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.98			Content of large stones	0.98
						Gravel content	0.06
211:							
Naxing	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.98			Content of large stones	0.98
						Gravel content	0.06
212:							
Newbell	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.64
213:							
Nimue	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
						Gravel content	0.05
214:							
Nimue	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.58			Content of large stones	0.58
						Gravel content	0.03
215:							
Nimue	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
						Gravel content	0.05
Rock outcrop	20	Not rated		Not rated		Not rated	
216:							
Nimue	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.58			Content of large stones	0.58
						Gravel content	0.03
Nimue, dry	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
						Gravel content	0.05

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
217:							
Nimue, dry	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
						Gravel content	0.05
Nimue	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.58			Content of large stones	0.58
						Gravel content	0.03
Rock outcrop	15	Not rated		Not rated		Not rated	
218:							
Oldbutte	85	Not limited		Not limited		Not limited	
219:							
Oldbutte	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
220:							
Palmich	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
221:							
Palmich	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
222:							
Palmich	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
223:							
Palmich	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
McCree	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Content of large stones	0.98
		Content of large stones	0.98			Depth to bedrock	0.05
224:							
Palmich	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
McCree	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Content of large stones	0.98
		Content of large stones	0.98			Depth to bedrock	0.05
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
225:							
Palmich	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
Rock outcrop	20	Not rated		Not rated		Not rated	
226:							
Palmont	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00			Gravel content	0.98
						Too sandy	0.50
227:							
Palmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00			Gravel content	0.98
						Too sandy	0.50
228:							
Palmont	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00			Gravel content	0.98
						Too sandy	0.50
229:							
Palmont	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00			Gravel content	0.98
						Too sandy	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
230:							
Ramparter	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
231:							
Ramparter	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
						Slope	1.00
232:							
Ramparter	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
233:							
Ramparter	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
234:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Seepage	1.00
				Slope	1.00	Gravel content	1.00
						Slope	1.00
235:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Seepage	1.00	Seepage	1.00
						Gravel content	1.00
236:							
Ramparter-----------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
Wilma---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too sandy	1.00	Seepage	1.00	Gravel content	0.98
		Seepage	1.00			Seepage	0.50
						Too sandy	0.50
237:							
Reggad--------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Content of large stones	1.00			Content of large stones	1.00
238:							
Reggad--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Content of large stones	1.00			Content of large stones	1.00
Serene--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Gravel content	0.08
239:							
Rock outcrop--------	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Blewett-------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	1.00

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
241:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Borland-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
242:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
		Content of large stones	0.07			Gravel content	0.09
						Content of large stones	0.07
Icicle--------------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.42	Content of large stones	1.00
		Content of large stones	1.00			Depth to bedrock	0.42
243:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
		Content of large stones	0.07			Gravel content	0.09
						Content of large stones	0.07
Icicle--------------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.42	Content of large stones	1.00
		Content of large stones	1.00			Depth to bedrock	0.42
244:							
Rock outcrop--------	60	Not rated		Not rated		Not rated	
Rubble land---------	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop--------	35	Not rated		Not rated		Not rated	
Rubble land---------	25	Not rated		Not rated		Not rated	

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
245:							
Serene--------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Gravel content	0.08
246:							
Rubble land---------	65	Not rated		Not rated		Not rated	
Rock outcrop--------	20	Not rated		Not rated		Not rated	
247:							
Safety--------------	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
248:							
Safety--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
249:							
Safety--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
250:							
Safety--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
251:							
Saska---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.86			Content of large stones	0.86
252:							
Saska---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.86			Content of large stones	0.86
253:							
Saska---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
254:							
Saska---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
255:							
Saska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85			Content of large stones	0.85
256:							
Saska	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85			Content of large stones	0.85
257:							
Saska	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.86			Content of large stones	0.86
Rock outcrop	20	Not rated		Not rated		Not rated	
258:							
Saska	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.86			Content of large stones	0.86
Saska, bouldery	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85			Content of large stones	0.85
259:							
Saska, south	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Saska	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85			Content of large stones	0.85
260:							
Saska	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.86			Content of large stones	0.86
Saska, bouldery	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85			Content of large stones	0.85
261:							
Saska	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.86			Content of large stones	0.86

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
261:							
Saska, bouldery-----	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85			Content of large stones	0.85
Rock outcrop--------	15	Not rated		Not rated		Not rated	
262:							
Saska, south--------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Saska---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.86			Content of large stones	0.86
Rock outcrop--------	15	Not rated		Not rated		Not rated	
263:							
Saydab--------------	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.87			Content of large stones	0.87
264:							
Scotties------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.88	Depth to bedrock	0.88
						Gravel content	0.35
265:							
Serene--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Gravel content	0.08
266:							
Serene--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Gravel content	0.08
Rock outcrop--------	25	Not rated		Not rated		Not rated	
267:							
Serpen--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.61	Gravel content	1.00
		Too clayey	0.50			Depth to bedrock	0.61
						Too clayey	0.50

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
268:							
Serpen--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.61	Gravel content	1.00
		Too clayey	0.50			Depth to bedrock	0.61
						Too clayey	0.50
269:							
Shadypass-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
270:							
Shamel--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.01
271:							
Shamel--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.01
272:							
Shamel--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.01
Rock outcrop--------	20	Not rated		Not rated		Not rated	
273:							
Shaser--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.35
Blewett-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	1.00
274:							
Shaser--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.35
Brisky--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.79
275:							
Shaser--------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.35

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
275:							
Chapot	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Gravel content	0.92
						Too clayey	0.50
276:							
Skipeak	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00	Slope	1.00	Gravel content	1.00
		Slope	1.00			Slope	1.00
						Too sandy	0.50
277:							
Skipeak	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00	Slope	1.00	Gravel content	1.00
		Slope	1.00			Slope	1.00
						Too sandy	0.50
Line	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00	Slope	1.00	Slope	1.00
		Slope	1.00			Gravel content	0.94
		Content of large stones	0.01			Too sandy	0.50
						Content of large stones	0.01
278:							
Soda	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.61			Content of large stones	0.61
279:							
Soda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.80			Content of large stones	0.80
280:							
Soda	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79			Content of large stones	0.79
281:							
Soda	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.06
						Content of large stones	0.04
282:							
Soda	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.06
						Content of large stones	0.04

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
283:							
Soda----------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.06
						Content of large stones	0.04
Rock outcrop--------	20	Not rated		Not rated		Not rated	
284:							
Soda----------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79			Content of large stones	0.79
Rock outcrop--------	20	Not rated		Not rated		Not rated	
285:							
Soda----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.61			Content of large stones	0.61
Soda, cold----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79			Content of large stones	0.79
286:							
Soda----------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.61			Content of large stones	0.61
Soda, cold----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79			Content of large stones	0.79
287:							
Soda----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.79			Content of large stones	0.79
Soda, cold----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.61			Content of large stones	0.61
Rock outcrop--------	15	Not rated		Not rated		Not rated	
288:							
Sodacreek-----------	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.98
						Gravel content	0.08

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
289:							
Sodacreek-----------	70	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.98
						Gravel content	0.08
Rock outcrop--------	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
Saska---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.86			Content of large stones	0.86
291:							
Spodic Vitrixerands	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Saska---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.86			Content of large stones	0.86
292:							
Stemilt-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
		Too clayey	0.50			Too clayey	0.50
293:							
Stemilt-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
		Too clayey	0.50			Too clayey	0.50
294:							
Surgh---------------	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.77	Gravel content	0.96
						Depth to bedrock	0.77
295:							
Surgh---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.77	Gravel content	0.96
						Depth to bedrock	0.77

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
296:							
Surgh---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.77	Gravel content	0.96
						Depth to bedrock	0.77
297:							
Surgh---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.87			Content of large stones	0.87
						Gravel content	0.02
Wedge---------------	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
						Slope	1.00
298:							
Swakane-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.91
299:							
Swakane-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.91
300:							
Swakane-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.77
						Seepage	0.50
Rock outcrop--------	25	Not rated		Not rated		Not rated	
301:							
Swakane-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.91
Rock outcrop--------	35	Not rated		Not rated		Not rated	
302:							
Switchback----------	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.01
303:							
Switchback----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.01

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
304:							
Switchback----------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.01
305:							
Taneum--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.01	Too clayey	0.50
		Too clayey	0.50			Depth to bedrock	0.01
306:							
Thow----------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Slope	1.00
		Slope	1.00			Gravel content	0.34
307:							
Thow----------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.34
308:							
Thow----------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.34
309:							
Thow----------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.34
Domkey--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.84
		Seepage	1.00	Depth to bedrock	0.84	Gravel content	0.01
Rock outcrop--------	20	Not rated		Not rated		Not rated	
310:							
Thowson-------------	85	Very limited		Not limited		Somewhat limited	
		Seepage	1.00			Gravel content	0.19
311:							
Thowson-------------	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Slope	0.63	Slope	0.63
		Slope	0.63			Gravel content	0.19
312:							
Thowson-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.19
313:							
Thowson-------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.19

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
314:							
Thowson-------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00				
315:							
Thowson-------------	60	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Slope	1.00
		Slope	1.00				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
316:							
Thowson-------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
317:							
Thowson-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00				
Rock outcrop--------	30	Not rated		Not rated		Not rated	
318:							
Thowson, stony------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00				
Thowson-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00			Gravel content	0.19
Rock outcrop--------	15	Not rated		Not rated		Not rated	
319:							
Tillicum------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	0.50
320:							
Tillicum------------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00	Depth to bedrock	0.96
		Seepage	1.00	Depth to bedrock	0.96	Seepage	0.50
321:							
Tillicum------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	0.96
		Seepage	1.00	Depth to bedrock	0.96	Seepage	0.50

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
322:							
Tillmont------------	75	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
				Depth to bedrock	0.77	Slope	1.00
						Depth to bedrock	0.77
323:							
Tillmont------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
				Depth to bedrock	0.77	Gravel content	1.00
						Depth to bedrock	0.77
324:							
Tillmont------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
				Depth to bedrock	0.77	Gravel content	1.00
						Depth to bedrock	0.77
Inkler--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Depth to bedrock	0.88	Gravel content	1.00
						Depth to bedrock	0.88
325:							
Tiptop--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.21			Gravel content	1.00
						Content of large stones	0.21
326:							
Tiptop--------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.21			Gravel content	1.00
						Content of large stones	0.21
Naxing--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.98			Content of large stones	0.98
						Gravel content	0.06
327:							
Totem---------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
						Slope	1.00
328:							
Totem---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
329:							
Totem	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
330:							
Totem	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
Chiwaukum	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.72			Content of large stones	0.72
331:							
Treen	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
332:							
Treen	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage	1.00			Seepage	0.50
Klapatche	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Depth to bedrock	1.00	Seepage	1.00
		Too sandy	1.00			Too sandy	0.50
		Content of large stones	0.01			Gravel content	0.26
333:							
Tronsen	80	Very limited		Very limited		Very limited	
		Too clayey	1.00	Slope	1.00	Too clayey	1.00
		Slope	1.00			Slope	1.00
						Gravel content	0.69
334:							
Tronsen	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00			Too clayey	1.00
						Gravel content	0.69
335:							
Tyee	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.20
336:							
Tyee	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.24

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
337:							
Tyee	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.24
338:							
Tyee	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.24
Bisping	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.01
339:							
Typic Cryaquands	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	0.99
340:							
Vabbing	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.99
341:							
Vabbing	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.99
342:							
Vabbing	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.99
Gilpar	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01			Gravel content	0.78
						Content of large stones	0.01
343:							
Vabbing	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.99
Rock outcrop	20	Not rated		Not rated		Not rated	
344:							
Vabus	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to saturated zone	1.00
		Content of large stones	0.02	Seepage	1.00	Gravel content	0.80
						Seepage	0.50
						Content of large stones	0.01

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
345:							
Vabus	75	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Content of large stones	0.02	Seepage	1.00	Gravel content	0.80
						Seepage	0.50
						Content of large stones	0.01
346:							
Vabus	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to saturated zone	1.00
		Content of large stones	0.02	Seepage	1.00	Gravel content	0.80
						Seepage	0.50
						Content of large stones	0.01
Chinkmin	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Too sandy	1.00	Slope	1.00	Depth to saturated zone	0.62
		Slope	1.00			Too sandy	0.50
						Gravel content	0.07
347:							
Vabus	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Content of large stones	0.02	Seepage	1.00	Gravel content	0.80
						Seepage	0.50
						Content of large stones	0.01
Chinkmin	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.62
		Too sandy	1.00			Too sandy	0.50
						Gravel content	0.07
348:							
Varelum	85	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
		Too clayey	0.50			Too clayey	0.50
349:							
Varelum	85	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
350:							
Varelum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
		Too clayey	0.50			Too clayey	0.50

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
351:							
Varelum	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
		Too clayey	0.50			Too clayey	0.50
352:							
Vitricryands	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
353:							
Vitricryands	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
Rock outcrop	30	Not rated		Not rated		Not rated	
354:							
Wagberg	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Content of large stones	0.08			Gravel content	0.14
						Content of large stones	0.08
355:							
Wagberg	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Content of large stones	0.08			Gravel content	0.14
						Content of large stones	0.08
356:							
Wagberg	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Content of large stones	0.06			Gravel content	0.13
						Content of large stones	0.06
Wagberg, south	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Content of large stones	0.11			Gravel content	0.12
						Content of large stones	0.11
357:							
Wagberg	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Content of large stones	0.08			Gravel content	0.14
						Content of large stones	0.08

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
357:							
Swakane-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.91
Rock outcrop--------	20	Not rated		Not rated		Not rated	
358:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
						Slope	1.00
359:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
360:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
						Slope	1.00
361:							
Wedge---------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
362:							
Wedge---------------	60	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
Typic Cryaquands----	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	0.99
363:							
Wedge---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
Wedge, cold---------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
364:							
Wedgemont-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Seepage	1.00	Gravel content	1.00

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
365:							
Wilma---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too sandy	1.00	Seepage	1.00	Gravel content	0.98
		Seepage	1.00			Seepage	0.50
						Too sandy	0.50
366:							
Wilma---------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Too sandy	1.00	Seepage	1.00	Gravel content	0.98
		Seepage	1.00			Seepage	0.50
						Too sandy	0.50
Rock outcrop--------	15	Not rated		Not rated		Not rated	
367:							
Yaxing--------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
368:							
Yaxing--------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
369:							
Yaxon---------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
370:							
Yaxon---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
371:							
Yaxon---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
372:							
Yaxon---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
373:							
Yaxon---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
374:							
Zeb-----------------	75	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Content of large stones	0.03			Gravel content	0.27
						Content of large stones	0.03

Table 11b.--Sanitary Facilities (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
W:							
Water	100	Not rated		Not rated		Not rated	

Table 12.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents---	75	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Water erosion	0.99	Shrink-swell	0.87		
2:							
Almac---------------	85	Fair		Fair		Poor	
		Too acid	0.74	Slope	0.92	Slope	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.82
						Rock fragments	0.88
		Water erosion	0.99				
3:							
Almac---------------	80	Fair		Poor		Poor	
		Too acid	0.74	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.82
						Rock fragments	0.88
		Water erosion	0.99				
4:							
Almac---------------	80	Fair		Poor		Poor	
		Too acid	0.74	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.82
						Rock fragments	0.88
		Water erosion	0.99				
5:							
Almac---------------	40	Fair		Poor		Poor	
		Too acid	0.74	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
						Rock fragments	0.88
		Water erosion	0.99				
Azwell--------------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Stone content	0.17	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.21	Stone content	0.40	Depth to bedrock	0.21
		Too acid	0.84	Cobble content	0.98		
		Low content of organic matter	0.88				
6:							
Almac---------------	35	Fair		Poor		Poor	
		Too acid	0.74	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
						Rock fragments	0.88
		Water erosion	0.99				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6:							
Azwell	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Stone content	0.17	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.21	Stone content	0.40	Depth to bedrock	0.21
		Too acid	0.84	Cobble content	0.98		
		Low content of organic matter	0.88				
Rock outcrop	15	Not rated		Not rated		Not rated	
7:							
Almac	55	Fair		Poor		Poor	
		Too acid	0.74	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
						Rock fragments	0.88
		Water erosion	0.99				
Rock outcrop	25	Not rated		Not rated		Not rated	
8:							
Alnult	70	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Cobble content	0.53	Cobble content	0.00	Hard to reclaim	0.00
		Droughty	0.85	Stone content	0.00	Rock fragments	0.00
		Too acid	0.95				
Reggad	15	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.29	Stone content	0.00	Rock fragments	0.00
		Too acid	0.50	Cobble content	0.13	Content of organic matter	0.00
		Cobble content	0.92				
						Too acid	0.88
9:							
Altapeak	85	Poor		Fair		Poor	
		Droughty	0.00	Depth to bedrock	0.87	Rock fragments	0.00
		Too acid	0.50	Slope	0.92	Hard to reclaim	0.00
		Low content of organic matter	0.88			Slope	0.00
10:							
Altapeak	75	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.87	Rock fragments	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
11:							
Altapeak	75	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.87	Rock fragments	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
12:							
Altapeak------------	80	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.39	Rock fragments	0.00
		Low content of organic matter	0.88	Cobble content	0.99	Hard to reclaim	0.00
13:							
Altapeak------------	40	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.39	Rock fragments	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
Alnult--------------	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Cobble content	0.53	Cobble content	0.00	Hard to reclaim	0.00
		Droughty	0.85	Stone content	0.00	Rock fragments	0.00
		Too acid	0.95				
14:							
Altapeak------------	40	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.39	Rock fragments	0.00
		Low content of organic matter	0.88	Cobble content	0.99	Hard to reclaim	0.00
Alnult--------------	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Cobble content	0.53	Cobble content	0.00	Hard to reclaim	0.00
		Droughty	0.85	Stone content	0.00	Rock fragments	0.00
		Too acid	0.95				
15:							
Altapeak------------	40	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.39	Rock fragments	0.00
		Low content of organic matter	0.88	Cobble content	0.99	Hard to reclaim	0.00
Alnult--------------	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Cobble content	0.53	Cobble content	0.00	Hard to reclaim	0.00
		Droughty	0.85	Stone content	0.00	Rock fragments	0.00
		Too acid	0.95				
16:							
Anatone-------------	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Cobble content	0.39	Cobble content	0.20	Depth to bedrock	0.00
Blewett-------------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
17:							
Anatone-------------	70	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Cobble content	0.39	Cobble content	0.20	Depth to bedrock	0.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
18:							
Andic Cryochrepts---	75	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.57	Hard to reclaim	0.00
		Stone content	0.93	Stone content	0.84	Rock fragments	0.00
		Too acid	0.95				
19:							
Andic Cryumbrepts---	80	Fair		Poor		Poor	
		Droughty	0.48	Slope	0.00	Slope	0.00
		Too acid	0.95	Cobble content	0.99	Rock fragments	0.00
						Hard to reclaim	0.00
20:							
Andic Cryumbrepts---	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Rock fragments	0.00
		Too acid	0.95			Depth to bedrock	0.10
		Stone content	0.98				
21:							
Andic Cryumbrepts---	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Rock fragments	0.00
		Too acid	0.95			Depth to bedrock	0.10
		Stone content	0.98				
Haplocryods---------	30	Fair		Poor		Poor	
		Stone content	0.61	Slope	0.00	Slope	0.00
		Water erosion	0.99			Hard to reclaim	0.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
22:							
Andic Cryumbrepts---	55	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Rock fragments	0.00
		Too acid	0.95	Cobble content	0.99	Depth to bedrock	0.10
		Stone content	0.98				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
23:							
Andic Cryumbrepts---	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Depth to bedrock	0.10
		Too acid	0.95				
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24:							
Andic Haplumbrepts	45	Poor Droughty Depth to bedrock Too acid	 0.00 0.46 0.95	Poor Depth to bedrock Slope	 0.00 0.00	Poor Slope Rock fragments Depth to bedrock	 0.00 0.00 0.46
Rock outcrop	30	Not rated		Not rated		Not rated	
25:							
Angle	80	Poor Wind erosion Low content of organic matter Too sandy Droughty Too acid	 0.00 0.12 0.16 0.39 0.95	Poor Slope	 0.00	Poor Slope Too sandy Rock fragments	 0.00 0.16 0.50
26:							
Aquic Cryumprepts	75	Poor Wind erosion Too sandy Low content of organic matter Too acid Droughty	 0.00 0.00 0.12 0.84 0.98	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Too sandy Hard to reclaim	 0.00 0.00 0.00
27:							
Ardening	80	Fair Low content of organic matter Droughty	 0.12 0.63	Poor Slope Depth to bedrock	 0.00 0.04	Poor Slope Rock fragments Hard to reclaim	 0.00 0.00 0.50
28:							
Ardenmont	85	Fair Low content of organic matter	 0.12	Fair Slope Depth to bedrock	 0.68 0.68	Poor Slope Rock fragments Hard to reclaim	 0.00 0.50 0.98
29:							
Ardenmont	85	Fair Low content of organic matter	 0.12	Poor Slope Depth to bedrock	 0.00 0.68	Poor Slope Rock fragments Hard to reclaim	 0.00 0.50 0.98
30:							
Ardenmont	85	Fair Low content of organic matter	 0.12	Poor Slope Depth to bedrock	 0.00 0.68	Poor Slope Rock fragments Hard to reclaim	 0.00 0.50 0.98
31:							
Ardenmont	40	Fair Low content of organic matter	 0.12	Poor Slope Depth to bedrock	 0.00 0.68	Poor Slope Rock fragments Hard to reclaim	 0.00 0.50 0.98
Swakane	35	Poor Droughty Depth to bedrock Stone content	 0.00 0.00 0.99	Poor Depth to bedrock Slope	 0.00 0.00	Poor Slope Rock fragments Depth to bedrock	 0.00 0.00 0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
32:							
Ardenvoir-----------	80	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Cobble content	0.92	Hard to reclaim	0.00
				Depth to bedrock	0.95	Rock fragments	0.00
33:							
Ardenvoir-----------	80	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Cobble content	0.92	Hard to reclaim	0.00
				Depth to bedrock	0.95	Rock fragments	0.00
34:							
Azwell--------------	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Stone content	0.17	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.21	Stone content	0.40	Depth to bedrock	0.21
		Too acid	0.84	Cobble content	0.98		
		Low content of organic matter	0.88				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
35:							
Bagmont-------------	80	Fair		Poor		Poor	
		Droughty	0.01	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.50	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.99	Cobble content	0.80	Depth to bedrock	0.99
36:							
Bigcreek------------	85	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
		Droughty	0.53			Rock fragments	0.00
37:							
Billyridge----------	75	Fair		Good		Fair	
		Low content of organic matter	0.88			Hard to reclaim	0.50
						Rock fragments	0.50
38:							
Billyridge----------	75	Fair		Good		Fair	
		Low content of organic matter	0.88			Slope	0.37
						Hard to reclaim	0.50
						Rock fragments	0.50
39:							
Billyridge----------	75	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.50	Slope	0.00
						Hard to reclaim	0.50
						Rock fragments	0.50
40:							
Bisping-------------	85	Fair		Good		Poor	
		Low content of organic matter	0.88			Rock fragments	0.00
		Water erosion	0.99			Slope	0.96

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
41:							
Bisping-------------	85	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.08	Slope	0.00
						Rock fragments	0.00
		Water erosion	0.99				
42:							
Bisping-------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
						Rock fragments	0.00
		Water erosion	0.99				
43:							
Bjork---------------	85	Fair		Poor		Poor	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.49	Slope	0.00	Depth to bedrock	0.10
		Low content of organic matter	0.50	Shrink-swell	0.87	Rock fragments	0.97
		Water erosion	0.90				
44:							
Bjork---------------	55	Fair		Poor		Poor	
		Low content of organic matter	0.50	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Depth to bedrock	0.54
		Depth to bedrock	0.54	Shrink-swell	0.87	Rock fragments	0.97
		Droughty	0.91				
		Water erosion	0.99				
Rock outcrop--------	30	Not rated		Not rated		Not rated	
45:							
Blag----------------	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.12			Rock fragments	0.50
Cle Elum------------	25	Fair		Poor		Poor	
		Depth to bedrock	0.21	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.79	Slope	0.00	Depth to bedrock	0.21
		Water erosion	0.99	Shrink-swell	0.97		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
46:							
Blag----------------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.12			Rock fragments	0.50
Rock outcrop--------	30	Not rated		Not rated		Not rated	
47:							
Blewett-------------	65	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
48:							
Borland	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
				Shrink-swell	0.87		
49:							
Borland	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
				Shrink-swell	0.87		
Rock outcrop	20	Not rated		Not rated		Not rated	
50:							
Brief	85	Fair		Good		Poor	
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
		Droughty	0.51				
51:							
Brisky	65	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.00
Rock outcrop	20	Not rated		Not rated		Not rated	
52:							
Burch	85	Fair		Good		Good	
		Low content of organic matter	0.50				
		Water erosion	0.68				
53:							
Burnscreek	80	Fair		Fair		Poor	
		Droughty	0.62	Cobble content	0.13	Hard to reclaim	0.00
		Cobble content	0.78	Slope	0.92	Rock fragments	0.00
		Low content of organic matter	0.88			Slope	0.00
54:							
Burrant	85	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.90				
55:							
Burrant	80	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.92	Slope	0.00
		Water erosion	0.90				
56:							
Cashmont	80	Fair		Good		Poor	
		Low content of organic matter	0.12			Rock fragments	0.00
						Hard to reclaim	0.02
		Droughty	0.99				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
57:							
Cashmont	80	Fair Low content of organic matter	 0.12	Fair Slope	 0.92	Poor Rock fragments Slope Hard to reclaim	 0.00 0.00 0.68
58:							
Chapot	90	Poor Stone content Low content of organic matter Too clayey	 0.00 0.12 0.95	Poor Slope Stone content Shrink-swell	 0.00 0.00 0.93	Poor Slope Rock fragments Too clayey Hard to reclaim	 0.00 0.00 0.55 0.68
59:							
Chinkmin	85	Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.60	Fair Depth to saturated zone Slope Cobble content	 0.80 0.92 0.98	Poor Rock fragments Slope Depth to saturated zone	 0.00 0.00 0.80
60:							
Chinkmin	85	Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.60	Poor Slope Depth to saturated zone Cobble content	 0.00 0.80 0.98	Poor Slope Rock fragments Depth to saturated zone	 0.00 0.00 0.80
61:							
Chinkmin	40	Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.60	Fair Depth to saturated zone Slope Cobble content	 0.80 0.92 0.98	Poor Rock fragments Slope Depth to saturated zone	 0.00 0.00 0.80
Altapeak	30	Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.88	Fair Depth to bedrock Slope Cobble content	 0.39 0.92 0.99	Poor Rock fragments Hard to reclaim Slope	 0.00 0.00 0.00
62:							
Chinkmin	40	Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.60	Poor Slope Depth to saturated zone Cobble content	 0.00 0.80 0.98	Poor Slope Rock fragments Depth to saturated zone	 0.00 0.00 0.80
Altapeak	30	Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.88	Poor Slope Depth to bedrock Cobble content	 0.00 0.39 0.99	Poor Slope Rock fragments Hard to reclaim	 0.00 0.00 0.00
63:							
Chiwaukum	90	Fair Too acid Droughty Stone content Low content of organic matter	 0.74 0.74 0.80 0.88	Fair Slope	 0.92	Poor Hard to reclaim Slope Rock fragments	 0.00 0.00 0.50

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
64:							
Chiwaukum-----------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Stone content	0.23	Stone content	0.53	Hard to reclaim	0.00
		Droughty	0.37	Cobble content	0.78	Rock fragments	0.00
		Too acid	0.74				
		Cobble content	0.95				
65:							
Chiwaukum-----------	75	Fair		Fair		Poor	
		Stone content	0.67	Slope	0.92	Hard to reclaim	0.00
		Too acid	0.74	Stone content	0.98	Slope	0.00
		Droughty	0.79			Rock fragments	0.50
		Low content of organic matter	0.88				
66:							
Chiwaukum-----------	80	Fair		Fair		Poor	
		Low content of organic matter	0.12	Stone content	0.47	Hard to reclaim	0.00
		Stone content	0.20	Cobble content	0.64	Rock fragments	0.00
		Droughty	0.23	Slope	0.68	Slope	0.00
		Too acid	0.74				
		Cobble content	0.92				
67:							
Chiwaukum-----------	40	Fair		Fair		Poor	
		Too acid	0.74	Slope	0.92	Hard to reclaim	0.00
		Droughty	0.74			Slope	0.00
		Stone content	0.80			Rock fragments	0.50
		Low content of organic matter	0.88				
Chiwaukum, south----	35	Fair		Fair		Poor	
		Stone content	0.67	Slope	0.92	Hard to reclaim	0.00
		Too acid	0.74	Stone content	0.98	Slope	0.00
		Droughty	0.79			Rock fragments	0.50
		Low content of organic matter	0.88				
68:							
Chiwaukum-----------	40	Fair		Poor		Poor	
		Too acid	0.74	Slope	0.00	Slope	0.00
		Droughty	0.74			Hard to reclaim	0.00
		Stone content	0.80			Rock fragments	0.50
		Low content of organic matter	0.88				
Chiwaukum, south----	35	Fair		Poor		Poor	
		Stone content	0.67	Slope	0.00	Slope	0.00
		Too acid	0.74	Stone content	0.98	Hard to reclaim	0.00
		Droughty	0.79			Rock fragments	0.50
		Low content of organic matter	0.88				
69:							
Chiwawa-------------	85	Poor		Good		Poor	
		Wind erosion	0.00			Hard to reclaim	0.00
						Rock fragments	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70:							
Choralmont, till substratum	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too sandy	0.22			Hard to reclaim	0.00
						Rock fragments	0.00
						Too sandy	0.22
Choralmont	35	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Too sandy	0.00
						Hard to reclaim	0.00
						Rock fragments	0.00
71:							
Choralmont	85	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.92	Too sandy	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
						Slope	0.00
72:							
Choralmont	85	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Too sandy	0.00
						Hard to reclaim	0.00
						Rock fragments	0.00
73:							
Choralmont	85	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.92	Hard to reclaim	0.00
		Too sandy	0.22			Rock fragments	0.00
						Slope	0.00
						Too sandy	0.22
74:							
Choralmont	75	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too sandy	0.22			Hard to reclaim	0.00
						Rock fragments	0.00
						Too sandy	0.22
75:							
Choralmont	50	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Too sandy	0.00
						Hard to reclaim	0.00
						Rock fragments	0.00
Limking	30	Fair		Poor		Poor	
		Droughty	0.02	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Depth to bedrock	0.58	Hard to reclaim	0.00
				Stone content	0.62	Rock fragments	0.00
		Too sandy	0.19	Cobble content	0.93	Too sandy	0.19
		Stone content	0.48				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
76:							
Chumstick	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Stone content	0.00	Depth to bedrock	0.00
		Stone content	0.00	Slope	0.92	Slope	0.00
		Low content of organic matter	0.88				
77:							
Chumstick	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.00	Stone content	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.88				
78:							
Chumstick	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.00	Stone content	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.88				
79:							
Cle Elum	85	Fair		Poor		Poor	
		Droughty	0.79	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.93	Slope	0.00	Depth to bedrock	0.93
		Water erosion	0.99				
80:							
Cle Elum	75	Fair		Poor		Poor	
		Droughty	0.79	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.93	Slope	0.00	Depth to bedrock	0.93
		Water erosion	0.99				
81:							
Coopmont	85	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.92	Hard to reclaim	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
						Slope	0.00
						Too sandy	0.00
82:							
Coopmont	80	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
						Too sandy	0.00
83:							
Cowiche	45	Fair		Fair		Fair	
		Low content of organic matter	0.12	Depth to bedrock	0.58	Slope	0.04
				Shrink-swell	0.97		
		Water erosion	0.90				
Cowiche, very deep	40	Fair		Good		Fair	
		Low content of organic matter	0.12			Slope	0.04
		Water erosion	0.68				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
84:							
Cowiche	50	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Water erosion	0.90	Depth to bedrock	0.58		
				Shrink-swell	0.97		
Cowiche, very deep	30	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Water erosion	0.68				
85:							
Cryomont	80	Poor		Fair		Poor	
		Too sandy	0.00	Cobble content	0.38	Too sandy	0.00
		Droughty	0.00	Stone content	0.86	Hard to reclaim	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
		Stone content	0.85				
		Cobble content	0.98				
86:							
Cryomont	75	Poor		Fair		Poor	
		Too sandy	0.00	Cobble content	0.34	Too sandy	0.00
		Droughty	0.00	Slope	0.82	Hard to reclaim	0.00
		Low content of organic matter	0.12	Stone content	0.86	Rock fragments	0.00
		Stone content	0.84			Slope	0.00
		Cobble content	0.97				
87:							
Cryomont	40	Poor		Fair		Poor	
		Too sandy	0.00	Cobble content	0.38	Too sandy	0.00
		Droughty	0.00	Stone content	0.59	Hard to reclaim	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
		Stone content	0.68				
		Cobble content	0.98				
Cryomont, fan	35	Poor		Fair		Poor	
		Too sandy	0.00	Cobble content	0.34	Too sandy	0.00
		Droughty	0.00	Stone content	0.65	Hard to reclaim	0.00
		Low content of organic matter	0.12	Slope	0.82	Rock fragments	0.00
		Stone content	0.71			Slope	0.00
		Cobble content	0.97				
88:							
Culving	65	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.01	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Shrink-swell	0.87	Depth to bedrock	0.01
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89:							
Culvop	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.12			Depth to bedrock	0.00
		Too acid	0.95				
90:							
Devore	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Stone content	0.00	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.16	Stone content	0.00	Depth to bedrock	0.16
		Too acid	0.74	Cobble content	0.97		
		Low content of organic matter	0.88				
Rock outcrop	15	Not rated		Not rated		Not rated	
91:							
Dinkelman	80	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Depth to bedrock	0.04	Rock fragments	0.00
		Droughty	0.89			Hard to reclaim	0.88
92:							
Dinkelman	80	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Depth to bedrock	0.04	Rock fragments	0.00
		Droughty	0.89			Hard to reclaim	0.88
93:							
Dinkelman	55	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Depth to bedrock	0.04	Rock fragments	0.00
		Droughty	0.89			Hard to reclaim	0.88
Rock outcrop	25	Not rated		Not rated		Not rated	
94:							
Dinkels	85	Fair		Good		Fair	
		Low content of organic matter	0.50			Rock fragments	0.12
						Slope	0.37
		Water erosion	0.99				
95:							
Dinkels	90	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.08	Slope	0.00
						Rock fragments	0.12
		Water erosion	0.99				
96:							
Dinkels	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.50

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
97:							
Domkey	80	Fair		Fair		Poor	
		Low content of organic matter	0.12	Depth to bedrock	0.16	Rock fragments	0.00
				Slope	0.82	Slope	0.00
		Droughty	0.56			Hard to reclaim	0.08
98:							
Domkey	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.16	Rock fragments	0.00
		Droughty	0.56			Hard to reclaim	0.08
99:							
Domkey	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.16	Rock fragments	0.00
		Droughty	0.56			Hard to reclaim	0.08
McCree	35	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.04	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.90	Hard to reclaim	0.02
				Depth to bedrock	0.95		
100:							
Dragoon	80	Fair		Poor		Poor	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.44	Slope	0.00	Depth to bedrock	0.10
		Low content of organic matter	0.50	Shrink-swell	0.87		
		Water erosion	0.99				
101:							
Dragoon	75	Fair		Poor		Poor	
		Depth to bedrock	0.29	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.50	Slope	0.00	Depth to bedrock	0.29
				Shrink-swell	0.89		
		Water erosion	0.90				
		Droughty	0.93				
102:							
Entiat	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.50			Depth to bedrock	0.00
103:							
Entiat	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.50			Depth to bedrock	0.00
Rock outcrop	25	Not rated		Not rated		Not rated	

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
104:							
Entic Haplumbrepts--	90	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Droughty	0.00	Cobble content	0.00	Too sandy	0.00
		Cobble content	0.00	Depth to bedrock	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12	Stone content	0.87	Rock fragments	0.00
		Too acid	0.74				
		Stone content	0.87				
105:							
Esmeralda-----------	75	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.00	Hard to reclaim	0.00
		Droughty	0.45	Stone content	0.99	Rock fragments	0.00
		Cobble content	0.54				
		Too acid	0.74				
		Stone content	0.99				
106:							
Esmeralda-----------	45	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.00	Hard to reclaim	0.00
		Droughty	0.45	Stone content	0.99	Rock fragments	0.00
		Cobble content	0.54				
		Too acid	0.74				
		Stone content	0.99				
Rock outcrop--------	35	Not rated		Not rated		Not rated	
107:							
Fears---------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.30	Hard to reclaim	0.00
		Droughty	0.39	Stone content	0.95	Rock fragments	0.00
		Cobble content	0.89				
		Too acid	0.95				
		Stone content	0.98				
108:							
Fears---------------	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.30	Hard to reclaim	0.00
		Droughty	0.39	Stone content	0.95	Rock fragments	0.00
		Cobble content	0.89				
		Too acid	0.95				
		Stone content	0.98				
Devore--------------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Stone content	0.00	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.16	Stone content	0.00	Depth to bedrock	0.16
		Too acid	0.74	Cobble content	0.97		
		Low content of organic matter	0.88				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
109:							
Fernow--------------	80	Fair		Fair		Poor	
		Too acid	0.54	Slope	0.92	Hard to reclaim	0.00
						Slope	0.00
						Rock fragments	0.50
110:							
Fernow--------------	80	Fair		Poor		Poor	
		Too acid	0.54	Slope	0.00	Slope	0.00
						Hard to reclaim	0.00
						Rock fragments	0.50
111:							
Fernow--------------	50	Fair		Poor		Poor	
		Too acid	0.54	Slope	0.00	Slope	0.00
						Hard to reclaim	0.00
						Rock fragments	0.50
Serene--------------	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Rock fragments	0.00
		Too sandy	0.11	Cobble content	0.98	Depth to bedrock	0.10
		Low content of organic matter	0.12			Too sandy	0.11
		Too acid	0.74				
112:							
Fluvaquents---------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Water erosion	0.90				
113:							
Georgecreek---------	80	Fair		Fair		Fair	
		Low content of organic matter	0.88	Depth to bedrock	0.04	Rock fragments	0.50
				Shrink-swell	0.87	Slope	0.96
114:							
Georgecreek---------	80	Fair		Fair		Poor	
		Low content of organic matter	0.88	Depth to bedrock	0.04	Slope	0.00
				Slope	0.08	Rock fragments	0.50
				Shrink-swell	0.87		
115:							
Georgecreek---------	80	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Depth to bedrock	0.04	Rock fragments	0.50
				Shrink-swell	0.87		
116:							
Georgecreek---------	50	Fair		Fair		Fair	
		Low content of organic matter	0.88	Depth to bedrock	0.04	Rock fragments	0.50
				Shrink-swell	0.87	Slope	0.96
Dragoon-------------	30	Fair		Poor		Fair	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Depth to bedrock	0.10
		Droughty	0.44	Shrink-swell	0.87	Slope	0.96
		Low content of organic matter	0.50				
		Water erosion	0.99				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
117:							
Georgecreek---------	40	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.08	Slope	0.00
				Shrink-swell	0.99	Rock fragments	0.50
		Water erosion	0.90	Depth to bedrock	0.99		
Dragoon-------------	40	Fair		Poor		Poor	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.44	Slope	0.08	Depth to bedrock	0.10
		Low content of organic matter	0.50	Shrink-swell	0.87		
		Water erosion	0.99				
118:							
Gilpar--------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.89	Hard to reclaim	0.00
		Too acid	0.74	Stone content	0.96	Rock fragments	0.00
		Droughty	0.86				
		Stone content	0.98				
119:							
Gilpar--------------	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.89	Hard to reclaim	0.00
		Too acid	0.74	Stone content	0.96	Rock fragments	0.00
		Droughty	0.86				
		Stone content	0.98				
Nimue---------------	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.40	Stone content	0.00	Rock fragments	0.00
		Too acid	0.50	Cobble content	0.82	Hard to reclaim	0.00
120:							
Gilpar--------------	35	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.89	Hard to reclaim	0.00
		Too acid	0.74	Stone content	0.96	Rock fragments	0.00
		Droughty	0.86				
		Stone content	0.98				
Nimue---------------	25	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Stone content	0.00	Rock fragments	0.00
		Droughty	0.53	Cobble content	0.71	Hard to reclaim	0.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
121:							
Gilpar--------------	60	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.89	Hard to reclaim	0.00
		Too acid	0.74	Stone content	0.96	Rock fragments	0.00
		Droughty	0.86				
		Stone content	0.98				
Rock outcrop--------	25	Not rated		Not rated		Not rated	

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak------------	85	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Depth to bedrock	0.04	Hard to reclaim	0.00
		Droughty	0.96			Rock fragments	0.00
124:							
Goffpeak------------	40	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Depth to bedrock	0.04	Hard to reclaim	0.00
		Droughty	0.96			Rock fragments	0.00
Fears---------------	35	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Cobble content	0.30	Hard to reclaim	0.00
		Droughty	0.39	Stone content	0.95	Rock fragments	0.00
		Cobble content	0.89				
		Too acid	0.95				
		Stone content	0.98				
125:							
Haplocryods, cold---	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter				Depth to bedrock	0.16
		Depth to bedrock	0.16				
		Water erosion	0.90				
		Too acid	0.95				
Haplocryods, stony--	30	Fair		Poor		Poor	
		Stone content	0.61	Slope	0.00	Hard to reclaim	0.00
		Water erosion	0.99			Slope	0.00
126:							
Haplocryods---------	40	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Depth to bedrock	0.74	Hard to reclaim	0.00
		Droughty	0.62			Rock fragments	0.00
		Too acid	0.74				
		Water erosion	0.99				
Andic Cryochrepts---	20	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Cobble content	0.57	Hard to reclaim	0.00
		Stone content	0.93	Stone content	0.84	Rock fragments	0.00
		Too acid	0.95				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
127:							
Haploxerolls--------	80	Fair		Fair		Poor	
		Low content of	0.12	Slope	0.02	Slope	0.00
		organic matter		Stone content	0.58	Rock fragments	0.00
		Stone content	0.89			Hard to reclaim	0.02
		Droughty	0.91				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
128:							
Haploxerolls--------	80	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Stone content	0.58	Rock fragments	0.00
		Stone content	0.89			Hard to reclaim	0.02
		Droughty	0.91				
129:							
Humicryods----------	40	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Droughty	0.00	Stone content	0.02	Slope	0.00
		Stone content	0.01	Slope	0.92	Too sandy	0.09
		Too sandy	0.09	Cobble content	0.96	Depth to bedrock	0.99
		Too acid	0.50				
		Low content of	0.50				
		organic matter					
		Depth to bedrock	0.99				
Andic Cryumbrepts---	35	Fair		Fair		Poor	
		Droughty	0.21	Cobble content	0.79	Rock fragments	0.00
		Too acid	0.95	Slope	0.92	Hard to reclaim	0.00
						Slope	0.00
130:							
Humicryods----------	40	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.01	Stone content	0.02	Too sandy	0.09
		Too sandy	0.09	Cobble content	0.96	Depth to bedrock	0.99
		Too acid	0.50				
		Low content of	0.50				
		organic matter					
		Depth to bedrock	0.99				
Andic Cryochrepts---	20	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Cobble content	0.57	Hard to reclaim	0.00
		Stone content	0.93	Stone content	0.84	Rock fragments	0.00
		Too acid	0.95				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
131:							
Humicryods----------	40	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.01	Stone content	0.02	Too sandy	0.09
		Too sandy	0.09	Cobble content	0.96	Depth to bedrock	0.99
		Too acid	0.50				
		Low content of	0.50				
		organic matter					
		Depth to bedrock	0.99				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131:							
Andic Cryumbrepts---	20	Fair		Poor		Poor	
		Droughty	0.33	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Depth to bedrock	0.68	Rock fragments	0.00
						Hard to reclaim	0.00
		Too acid	0.95				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
132:							
Hyprairie-----------	85	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Shrink-swell	0.97		
		Water erosion	0.90				
133:							
Hyprairie-----------	85	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Shrink-swell	0.97		
		Water erosion	0.90				
134:							
Hyprairie-----------	45	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Shrink-swell	0.97		
		Water erosion	0.90				
Oldbutte------------	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Too clayey	0.69
		Too clayey	0.95				
135:							
Icicle, south-------	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.02	Hard to reclaim	0.00
		Stone content	0.16	Stone content	0.37	Rock fragments	0.00
		Droughty	0.41				
		Cobble content	0.65				
		Too acid	0.99				
Icicle--------------	40	Fair		Poor		Poor	
		Stone content	0.10	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Hard to reclaim	0.00
				Stone content	0.22	Rock fragments	0.00
		Droughty	0.41				
		Cobble content	0.57				
		Too acid	0.99				
136:							
Icicle--------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.02	Hard to reclaim	0.00
		Stone content	0.16	Stone content	0.37	Rock fragments	0.00
		Droughty	0.41				
		Cobble content	0.65				
		Too acid	0.99				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
137:							
Icicle----------------	80	Fair		Poor		Poor	
		Stone content	0.10	Cobble content	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12	Stone content	0.22	Rock fragments	0.00
				Slope	0.92	Slope	0.00
		Droughty	0.41				
		Cobble content	0.57				
		Too acid	0.99				
138:							
Icicle----------------	75	Fair		Poor		Poor	
		Stone content	0.10	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Hard to reclaim	0.00
				Stone content	0.22	Rock fragments	0.00
		Droughty	0.41				
		Cobble content	0.57				
		Too acid	0.99				
139:							
Icicle----------------	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.04	Hard to reclaim	0.00
		Stone content	0.25	Stone content	0.56	Rock fragments	0.00
		Droughty	0.44				
		Cobble content	0.68				
		Too acid	0.99				
140:							
Icicle----------------	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.11	Stone content	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Rock fragments	0.00
				Depth to bedrock	0.58		
		Cobble content	0.59				
		Too acid	0.99				
Chumstick-------------	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.00	Stone content	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.88				
Rock outcrop----------	25	Not rated		Not rated		Not rated	
141:							
Icicle----------------	35	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.11	Stone content	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Rock fragments	0.00
				Depth to bedrock	0.58		
		Cobble content	0.59				
		Too acid	0.99				
Chumstick-------------	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.00	Stone content	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.88				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
141:							
Rock outcrop	25	Not rated		Not rated		Not rated	
142:							
Inkler	75	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Depth to bedrock	0.12	Hard to reclaim	0.00
		Stone content	0.99	Stone content	0.99	Rock fragments	0.00
143:							
Isella	40	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.92	Slope	0.00
		Too acid	0.74				
Fernow	35	Fair		Fair		Poor	
		Too acid	0.54	Slope	0.92	Hard to reclaim	0.00
						Slope	0.00
						Rock fragments	0.50
144:							
Isella	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too acid	0.74				
Fernow	35	Fair		Poor		Poor	
		Too acid	0.54	Slope	0.00	Slope	0.00
						Hard to reclaim	0.00
						Rock fragments	0.50
145:							
Isella	40	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.92	Slope	0.00
		Too acid	0.74				
Nimue	35	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Droughty	0.40	Cobble content	0.82	Hard to reclaim	0.00
		Too acid	0.50	Slope	0.92	Slope	0.00
146:							
Isella	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too acid	0.74				
Nimue	35	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Stone content	0.00	Rock fragments	0.00
		Droughty	0.53	Cobble content	0.71	Hard to reclaim	0.00
147:							
Kingmont	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Shrink-swell	0.99	Hard to reclaim	0.00
						Rock fragments	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
148:							
Kladnick------------	85	Poor		Fair		Poor	
		Too sandy	0.00	Cobble content	0.27	Too sandy	0.00
		Droughty	0.03	Stone content	0.89	Hard to reclaim	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
		Stone content	0.79				
		Cobble content	0.85				
		Too acid	0.95				
149:							
Kladnick------------	75	Poor		Fair		Poor	
		Too sandy	0.00	Cobble content	0.89	Too sandy	0.00
		Droughty	0.02	Slope	0.92	Hard to reclaim	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
						Slope	0.00
		Too acid	0.95				
150:							
Kladnick------------	80	Poor		Fair		Poor	
		Too sandy	0.00	Cobble content	0.02	Too sandy	0.00
		Droughty	0.00	Stone content	0.48	Hard to reclaim	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
						Slope	0.96
		Stone content	0.49				
		Cobble content	0.65				
		Too acid	0.95				
151:							
Klapatche-----------	40	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Too sandy	0.22	Cobble content	0.81	Too sandy	0.22
		Too acid	0.54			Depth to bedrock	0.97
		Low content of organic matter	0.88				
		Depth to bedrock	0.97				
Altapeak------------	35	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.87	Rock fragments	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
152:							
Kloochman-----------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to bedrock	0.00	Rock fragments	0.00
				Slope	0.92	Slope	0.00
		Droughty	0.13	Stone content	0.95	Depth to bedrock	0.84
		Depth to bedrock	0.84				
		Stone content	0.89				
153:							
Kloochman-----------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Droughty	0.13	Stone content	0.95	Depth to bedrock	0.84
		Depth to bedrock	0.84				
		Stone content	0.89				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
154:							
Kloochman-----------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Droughty	0.13	Stone content	0.95	Depth to bedrock	0.84
		Depth to bedrock	0.84				
		Stone content	0.89				
155:							
Kloochman-----------	45	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Droughty	0.13	Stone content	0.95	Depth to bedrock	0.84
		Depth to bedrock	0.84				
		Stone content	0.89				
Inkler-------------	35	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Depth to bedrock	0.12	Hard to reclaim	0.00
				Stone content	0.99	Rock fragments	0.00
		Stone content	0.99				
156:							
Kloochman-----------	35	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Droughty	0.13	Stone content	0.95	Depth to bedrock	0.93
		Stone content	0.92				
		Depth to bedrock	0.93				
Inkler-------------	30	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Depth to bedrock	0.12	Hard to reclaim	0.00
				Stone content	0.99	Rock fragments	0.00
		Stone content	0.99				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
157:							
Kloochman-----------	70	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Rock fragments	0.00
		Droughty	0.13	Stone content	0.95	Depth to bedrock	0.93
		Stone content	0.92				
		Depth to bedrock	0.93				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
158:							
Limking-------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Stone content	0.88	Hard to reclaim	0.00
		Too sandy	0.19	Depth to bedrock	0.99	Rock fragments	0.00
		Droughty	0.31	Cobble content	0.99	Too sandy	0.19
		Stone content	0.69				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
159:							
Limking	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too sandy	0.19	Stone content	0.88	Hard to reclaim	0.00
		Droughty	0.31	Depth to bedrock	0.99	Rock fragments	0.00
		Stone content	0.69	Cobble content	0.99	Too sandy	0.19
Coopmont	35	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
						Too sandy	0.00
160:							
Limking	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too sandy	0.19	Stone content	0.88	Hard to reclaim	0.00
		Droughty	0.31	Depth to bedrock	0.99	Rock fragments	0.00
		Stone content	0.69	Cobble content	0.99	Too sandy	0.19
Coopmont	35	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
						Too sandy	0.00
161:							
Limking	30	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too sandy	0.19	Stone content	0.88	Hard to reclaim	0.00
		Droughty	0.31	Depth to bedrock	0.99	Rock fragments	0.00
		Stone content	0.69	Cobble content	0.99	Too sandy	0.19
Coopmont	25	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
						Too sandy	0.00
Rock outcrop	20	Not rated		Not rated		Not rated	
162:							
Limking	55	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too sandy	0.19	Stone content	0.88	Hard to reclaim	0.00
		Droughty	0.31	Depth to bedrock	0.99	Rock fragments	0.00
		Stone content	0.69	Cobble content	0.99	Too sandy	0.19
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
163:							
Line	85	Poor		Fair		Poor	
		Too sandy	0.00	Cobble content	0.89	Hard to reclaim	0.00
		Low content of organic matter	0.12	Slope	0.92	Too sandy	0.00
		Droughty	0.40			Hard to reclaim	0.00
						Rock fragments	0.00
						Slope	0.00
164:							
Line	85	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.92	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.99	Too sandy	0.00
		Droughty	0.92			Hard to reclaim	0.00
						Rock fragments	0.00
						Slope	0.00
165:							
Line	85	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
		Droughty	0.43			Too sandy	0.00
		Too acid	0.99			Hard to reclaim	0.00
						Rock fragments	0.00
166:							
Line	40	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.92	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.99	Too sandy	0.00
		Droughty	0.92			Hard to reclaim	0.00
						Rock fragments	0.00
						Slope	0.00
Vabbing	35	Fair		Fair		Poor	
		Stone content	0.05	Stone content	0.76	Rock fragments	0.00
		Low content of organic matter	0.50	Slope	0.92	Hard to reclaim	0.00
		Too acid	0.95			Slope	0.00
		Droughty	0.95				
167:							
Loneridge	85	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.47	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.65	Rock fragments	0.00
		Stone content	0.82	Stone content	0.82	Too clayey	0.00
		Cobble content	0.98	Slope	0.92	Slope	0.00
168:							
Loneridge	85	Fair		Fair		Poor	
		Low content of organic matter	0.12	Cobble content	0.73	Hard to reclaim	0.00
		Stone content	0.94	Shrink-swell	0.76	Rock fragments	0.00
				Slope	0.92	Slope	0.00
				Stone content	0.98		
169:							
Loneridge	85	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Shrink-swell	0.12	Hard to reclaim	0.00
		Stone content	0.63	Stone content	0.50	Rock fragments	0.00
				Cobble content	0.60	Too clayey	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
170:							
Macreeing-----------	75	Fair		Poor		Poor	
		Droughty	0.05	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Hard to reclaim	0.00
		Cobble content	0.61	Depth to bedrock	0.39	Rock fragments	0.00
171:							
Macreeing-----------	75	Fair		Poor		Poor	
		Droughty	0.05	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Hard to reclaim	0.00
		Cobble content	0.61	Depth to bedrock	0.39	Rock fragments	0.00
172:							
Macreeing-----------	45	Fair		Poor		Poor	
		Droughty	0.05	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Hard to reclaim	0.00
		Cobble content	0.61	Depth to bedrock	0.39	Rock fragments	0.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	
173:							
Mansonia------------	85	Poor		Poor		Poor	
		Wind erosion	0.00	Slope	0.00	Slope	0.00
		Droughty	0.99			Hard to reclaim	0.00
						Rock fragments	0.00
174:							
Mansonia------------	50	Fair		Poor		Poor	
		Droughty	0.67	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.88	Depth to bedrock	0.58	Slope	0.00
						Hard to reclaim	0.08
Swakane-------------	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Stone content	0.99			Slope	0.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
175:							
Mansonia------------	30	Fair		Poor		Poor	
		Droughty	0.67	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88	Depth to bedrock	0.58	Rock fragments	0.00
						Hard to reclaim	0.08
Swakane-------------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.91	Stone content	0.99	Depth to bedrock	0.00
Rock outcrop--------	30	Not rated		Not rated		Not rated	

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
176:							
Marmont	85	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Droughty	0.00			Hard to reclaim	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
						Slope	0.96
177:							
Marmont	85	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.08	Slope	0.00
		Droughty	0.00			Too sandy	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
178:							
Marmont	85	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Droughty	0.00			Too sandy	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Rock fragments	0.00
179:							
McCree	80	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Droughty	0.04	Slope	0.68	Slope	0.00
		Low content of organic matter	0.12	Cobble content	0.90	Hard to reclaim	0.02
				Depth to bedrock	0.95		
180:							
McCree	80	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.04	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.90	Hard to reclaim	0.02
				Depth to bedrock	0.95		
181:							
McCree	80	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.04	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.90	Hard to reclaim	0.02
				Depth to bedrock	0.95		
182:							
McCree	50	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.04	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.90	Hard to reclaim	0.02
				Depth to bedrock	0.95		
Palmich	30	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.00
183:							
McCree	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.04	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.90	Hard to reclaim	0.02
				Depth to bedrock	0.95		

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
183:							
Palmont-------------	30	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Stone content	0.88	Stone content	0.91	Rock fragments	0.00
						Hard to reclaim	0.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
184:							
McCree--------------	55	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.04	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.90	Hard to reclaim	0.02
				Depth to bedrock	0.95		
Rock outcrop--------	25	Not rated		Not rated		Not rated	
185:							
Mippon--------------	75	Poor		Fair		Poor	
		Droughty	0.00	Depth to saturated zone	0.14	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.73	Rock fragments	0.00
		Too sandy	0.20			Depth to saturated zone	0.14
		Cobble content	0.99			Too sandy	0.20
186:							
Mippon--------------	75	Poor		Fair		Poor	
		Droughty	0.00	Depth to saturated zone	0.14	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.44	Rock fragments	0.00
		Too sandy	0.20			Depth to saturated zone	0.14
		Cobble content	0.97			Too sandy	0.20
187:							
Mippon--------------	75	Fair		Fair		Poor	
		Droughty	0.03	Depth to saturated zone	0.14	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.30	Rock fragments	0.00
		Too sandy	0.14	Stone content	0.65	Too sandy	0.14
		Stone content	0.85			Depth to saturated zone	0.14
		Cobble content	0.92				
188:							
Morical-------------	80	Fair		Poor		Poor	
		Droughty	0.82	Depth to bedrock	0.00	Rock fragments	0.00
		Low content of organic matter	0.88			Slope	0.96
		Depth to bedrock	0.97			Depth to bedrock	0.97
189:							
Morical-------------	80	Fair		Poor		Poor	
		Droughty	0.82	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.88	Slope	0.08	Rock fragments	0.00
		Depth to bedrock	0.97			Depth to bedrock	0.97

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
190:							
Morical	80	Fair		Poor		Poor	
		Droughty	0.67	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.88	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.93
		Depth to bedrock	0.93				
191:							
Morical	40	Fair		Poor		Poor	
		Droughty	0.82	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.88	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.97
		Depth to bedrock	0.97				
Dragoon	40	Fair		Poor		Poor	
		Depth to bedrock	0.29	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.50	Slope	0.00	Depth to bedrock	0.29
				Shrink-swell	0.89		
		Water erosion	0.90				
		Droughty	0.93				
192:							
Morical	65	Fair		Poor		Poor	
		Droughty	0.82	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.88	Slope	0.92	Rock fragments	0.00
						Depth to bedrock	0.97
		Depth to bedrock	0.97				
Dragoon	20	Fair		Poor		Poor	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.44	Shrink-swell	0.87	Depth to bedrock	0.10
		Low content of organic matter	0.50	Slope	0.92		
		Water erosion	0.99				
193:							
Morical	65	Fair		Poor		Poor	
		Droughty	0.82	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.88	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.97
		Depth to bedrock	0.97				
Dragoon	20	Fair		Poor		Poor	
		Depth to bedrock	0.10	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.44	Slope	0.00	Depth to bedrock	0.10
		Low content of organic matter	0.50	Shrink-swell	0.87		
		Water erosion	0.99				
194:							
Morical	65	Fair		Poor		Poor	
		Droughty	0.82	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.88	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.97
		Depth to bedrock	0.97				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
194:							
Dragoon-------------	20	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.08	Slope	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.50	Shrink-swell	0.87		
		Water erosion	0.99				
195:							
Mountaineer---------	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Cobble content	0.00	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Depth to bedrock	0.99
		Too acid	0.95				
		Depth to bedrock	0.99				
196:							
Mountaineer---------	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Cobble content	0.00	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Depth to bedrock	0.99
		Too acid	0.95				
		Depth to bedrock	0.99				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
197:							
Mountaineer---------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Cobble content	0.00	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Depth to bedrock	0.99
		Too acid	0.95				
		Depth to bedrock	0.99				
Tillicum------------	30	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.04	Hard to reclaim	0.50
		Droughty	0.70			Rock fragments	0.97
		Too acid	0.84				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
198:							
Nahahum-------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Shrink-swell	0.99	Hard to reclaim	0.00
		Too clayey	0.98			Rock fragments	0.50
						Too clayey	0.57
199:							
Nahahum-------------	50	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Shrink-swell	0.99	Hard to reclaim	0.00
		Too clayey	0.98			Rock fragments	0.50
						Too clayey	0.57

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
199:							
Taneum	40	Fair		Poor		Poor	
		Low content of	0.88	Slope	0.00	Slope	0.00
		organic matter		Shrink-swell	0.93	Hard to reclaim	0.00
		Water erosion	0.99	Depth to bedrock	0.99	Rock fragments	0.50
200:							
Nard	75	Fair		Fair		Poor	
		Low content of	0.12	Shrink-swell	0.87	Slope	0.00
		organic matter		Slope	0.92		
		Too acid	0.97				
		Water erosion	0.99				
201:							
Nard	75	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Shrink-swell	0.87		
		Too acid	0.97				
		Water erosion	0.99				
202:							
Nard	40	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Shrink-swell	0.87		
		Too acid	0.97				
		Water erosion	0.99				
Blag	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Low content of	0.12			Rock fragments	0.50
		organic matter					
203:							
Nard	50	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Shrink-swell	0.87		
		Too acid	0.97				
		Water erosion	0.99				
Brisky	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.00
204:							
Nardine	85	Fair		Fair		Fair	
		Too clayey	0.12	Depth to	0.09	Too clayey	0.07
		Low content of	0.12	saturated zone		Depth to	0.09
		organic matter				saturated zone	
		Water erosion	0.90				
		Too acid	0.99				
205:							
Nardmont	75	Fair		Fair		Poor	
		Low content of	0.12	Slope	0.92	Slope	0.00
		organic matter		Shrink-swell	0.92	Hard to reclaim	0.82
						Rock fragments	0.88

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
206:							
Nardmont	75	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Shrink-swell	0.92	Hard to reclaim	0.82
						Rock fragments	0.88
207:							
Natapoc	80	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12	Slope	0.92	Rock fragments	0.00
				Cobble content	0.99	Hard to reclaim	0.00
						Slope	0.00
208:							
Natapoc	80	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Hard to reclaim	0.00
				Cobble content	0.99	Rock fragments	0.00
						Hard to reclaim	0.00
209:							
Natapoc	45	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Hard to reclaim	0.00
				Cobble content	0.99	Rock fragments	0.00
						Hard to reclaim	0.00
Thow	30	Poor		Poor		Poor	
		Wind erosion	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
						Hard to reclaim	0.00
		Droughty	0.78				
210:							
Naxing	75	Fair		Poor		Poor	
		Stone content	0.03	Cobble content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Stone content	0.01	Hard to reclaim	0.00
				Slope	0.82	Slope	0.00
		Droughty	0.47				
		Too acid	0.74				
		Cobble content	0.74				
211:							
Naxing	75	Fair		Poor		Poor	
		Stone content	0.03	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Rock fragments	0.00
				Stone content	0.01	Hard to reclaim	0.00
		Droughty	0.47				
		Too acid	0.74				
		Cobble content	0.74				
212:							
Newbell	75	Good		Poor		Poor	
				Slope	0.00	Slope	0.00
				Cobble content	0.99	Hard to reclaim	0.00
						Rock fragments	0.00
						Hard to reclaim	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
213:							
Nimue---------------	75	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Stone content	0.00	Rock fragments	0.00
		Droughty	0.53	Cobble content	0.71	Hard to reclaim	0.00
214:							
Nimue---------------	75	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.40	Stone content	0.00	Rock fragments	0.00
		Too acid	0.50	Cobble content	0.82	Hard to reclaim	0.00
215:							
Nimue---------------	60	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Stone content	0.00	Rock fragments	0.00
		Droughty	0.53	Cobble content	0.71	Hard to reclaim	0.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
216:							
Nimue---------------	40	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.40	Stone content	0.00	Rock fragments	0.00
		Too acid	0.50	Cobble content	0.82	Hard to reclaim	0.00
Nimue, dry----------	35	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Stone content	0.00	Rock fragments	0.00
		Droughty	0.53	Cobble content	0.71	Hard to reclaim	0.00
217:							
Nimue, dry----------	35	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Stone content	0.00	Rock fragments	0.00
		Droughty	0.53	Cobble content	0.71	Hard to reclaim	0.00
Nimue---------------	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.40	Stone content	0.00	Rock fragments	0.00
		Too acid	0.50	Cobble content	0.82	Hard to reclaim	0.00
Rock outcrop--------	15	Not rated		Not rated		Not rated	
218:							
Oldbutte------------	85	Fair		Good		Fair	
		Low content of organic matter	0.12			Too clayey	0.69
		Too clayey	0.95				
219:							
Oldbutte------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Too clayey	0.69
		Too clayey	0.95				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
220:							
Palmich	90	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.08	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.00
221:							
Palmich	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.00
222:							
Palmich	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.00
223:							
Palmich	45	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.00
McCree	40	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.04	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.90	Hard to reclaim	0.02
				Depth to bedrock	0.95		
224:							
Palmich	30	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.00
McCree	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.04	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.90	Hard to reclaim	0.02
				Depth to bedrock	0.95		
Rock outcrop	20	Not rated		Not rated		Not rated	
225:							
Palmich	65	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.00
Rock outcrop	20	Not rated		Not rated		Not rated	
226:							
Palmont	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Stone content	0.93	Hard to reclaim	0.00
		Too sandy	0.14			Rock fragments	0.00
		Droughty	0.35			Too sandy	0.14
		Stone content	0.90				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
227:							
Palmont-------------	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too sandy	0.14	Stone content	0.93	Hard to reclaim	0.00
		Droughty	0.35			Rock fragments	0.00
		Stone content	0.90			Too sandy	0.14
228:							
Palmont-------------	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Droughty	0.33	Stone content	0.86	Hard to reclaim	0.00
		Stone content	0.85			Rock fragments	0.00
229:							
Palmont-------------	55	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too sandy	0.14	Stone content	0.93	Hard to reclaim	0.00
		Droughty	0.35			Rock fragments	0.00
		Stone content	0.90			Too sandy	0.14
Rock outcrop--------	30	Not rated		Not rated		Not rated	
230:							
Ramparter-----------	85	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Droughty	0.07			Too sandy	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
						Rock fragments	0.00
231:							
Ramparter-----------	85	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.82	Too sandy	0.00
		Droughty	0.00			Hard to reclaim	0.00
		Low content of organic matter	0.88			Rock fragments	0.00
						Slope	0.00
232:							
Ramparter-----------	80	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Droughty	0.00			Too sandy	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
						Rock fragments	0.00
233:							
Ramparter-----------	80	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Droughty	0.00			Too sandy	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
						Rock fragments	0.00
234:							
Ramparter-----------	85	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.82	Too sandy	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
		Droughty	0.29			Rock fragments	0.00
						Slope	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
235:							
Ramparter-----------	85	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Too sandy	0.00
						Hard to reclaim	0.00
		Droughty	0.29			Rock fragments	0.00
236:							
Ramparter-----------	50	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Droughty	0.07			Too sandy	0.00
		Low content of organic matter	0.88			Hard to reclaim	0.00
						Rock fragments	0.00
Wilma---------------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.97
		Depth to bedrock	0.97				
237:							
Reggad--------------	75	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.29	Stone content	0.00	Rock fragments	0.00
		Too acid	0.50	Cobble content	0.13	Content of organic matter	0.00
		Cobble content	0.92				
						Too acid	0.88
238:							
Reggad--------------	40	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.29	Stone content	0.00	Rock fragments	0.00
		Too acid	0.50	Cobble content	0.13	Content of organic matter	0.00
		Cobble content	0.92				
						Too acid	0.88
Serene--------------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Rock fragments	0.00
		Too sandy	0.11	Cobble content	0.98	Depth to bedrock	0.10
		Low content of organic matter	0.12			Too sandy	0.11
		Too acid	0.74				
239:							
Rock outcrop--------	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Blewett-------------	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
241:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Borland	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
				Shrink-swell	0.87		
242:							
Rock outcrop	40	Not rated		Not rated		Not rated	
Chumstick	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.00	Stone content	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.88				
Icicle	15	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.11	Stone content	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Rock fragments	0.00
				Depth to bedrock	0.58		
		Cobble content	0.59				
		Too acid	0.99				
243:							
Rock outcrop	40	Not rated		Not rated		Not rated	
Chumstick	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.00	Stone content	0.00	Depth to bedrock	0.00
		Low content of organic matter	0.88				
Icicle	15	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Droughty	0.11	Stone content	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.00	Rock fragments	0.00
				Depth to bedrock	0.58		
		Cobble content	0.59				
		Too acid	0.99				
244:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Rubble land	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop	35	Not rated		Not rated		Not rated	
Rubble land	25	Not rated		Not rated		Not rated	

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
245:							
Serene	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Rock fragments	0.00
		Too sandy	0.11	Cobble content	0.98	Depth to bedrock	0.10
		Low content of organic matter	0.12			Too sandy	0.11
		Too acid	0.74				
246:							
Rubble land	65	Not rated		Not rated		Not rated	
Rock outcrop	20	Not rated		Not rated		Not rated	
247:							
Safety	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.68	Depth to bedrock	0.10
		Low content of organic matter	0.50			Rock fragments	0.28
248:							
Safety	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Depth to bedrock	0.10
		Low content of organic matter	0.50			Rock fragments	0.28
249:							
Safety	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Depth to bedrock	0.10
		Low content of organic matter	0.50			Rock fragments	0.28
250:							
Safety	70	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Depth to bedrock	0.10
		Low content of organic matter	0.50			Rock fragments	0.28
Rock outcrop	15	Not rated		Not rated		Not rated	
251:							
Saska	75	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.92	Hard to reclaim	0.00
				Slope	0.92	Slope	0.00
		Droughty	0.74				
		Too acid	0.95				
252:							
Saska	75	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Rock fragments	0.00
				Cobble content	0.92	Hard to reclaim	0.00
		Droughty	0.74				
		Too acid	0.95				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
253:							
Saska	85	Fair		Fair		Poor	
		Droughty	0.89	Slope	0.92	Hard to reclaim	0.00
						Slope	0.00
						Rock fragments	0.28
254:							
Saska	80	Fair		Poor		Poor	
		Droughty	0.89	Slope	0.00	Slope	0.00
						Hard to reclaim	0.00
						Rock fragments	0.28
255:							
Saska	85	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Slope	0.92	Hard to reclaim	0.00
				Cobble content	0.93	Slope	0.00
		Droughty	0.75				
		Too acid	0.95				
256:							
Saska	85	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Rock fragments	0.00
				Cobble content	0.93	Hard to reclaim	0.00
		Droughty	0.75				
		Too acid	0.95				
257:							
Saska	65	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Rock fragments	0.00
				Cobble content	0.92	Hard to reclaim	0.00
		Droughty	0.74				
		Too acid	0.95				
Rock outcrop	20	Not rated		Not rated		Not rated	
258:							
Saska	40	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.92	Hard to reclaim	0.00
				Slope	0.92	Slope	0.00
		Droughty	0.74				
		Too acid	0.95				
Saska, bouldery	35	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Slope	0.92	Hard to reclaim	0.00
				Cobble content	0.93	Slope	0.00
		Droughty	0.75				
		Too acid	0.95				
259:							
Saska, south	40	Fair		Fair		Poor	
		Droughty	0.89	Slope	0.92	Hard to reclaim	0.00
						Slope	0.00
						Rock fragments	0.28

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
259:							
Saska	35	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Slope	0.92	Hard to reclaim	0.00
				Cobble content	0.93	Slope	0.00
		Droughty	0.75				
		Too acid	0.95				
260:							
Saska	40	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Rock fragments	0.00
				Cobble content	0.92	Hard to reclaim	0.00
		Droughty	0.74				
		Too acid	0.95				
Saska, bouldery	35	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Rock fragments	0.00
				Cobble content	0.93	Hard to reclaim	0.00
		Droughty	0.75				
		Too acid	0.95				
261:							
Saska	35	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Rock fragments	0.00
				Cobble content	0.92	Hard to reclaim	0.00
		Droughty	0.74				
		Too acid	0.95				
Saska, bouldery	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Rock fragments	0.00
				Cobble content	0.93	Hard to reclaim	0.00
		Droughty	0.75				
		Too acid	0.95				
Rock outcrop	15	Not rated		Not rated		Not rated	
262:							
Saska, south	35	Fair		Poor		Poor	
		Droughty	0.89	Slope	0.00	Slope	0.00
						Hard to reclaim	0.00
						Rock fragments	0.28
Saska	30	Poor		Poor		Poor	
		Stone content	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Stone content	0.00	Rock fragments	0.00
				Cobble content	0.92	Hard to reclaim	0.00
		Droughty	0.74				
		Too acid	0.95				
Rock outcrop	15	Not rated		Not rated		Not rated	

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
263:							
Saydab	80	Fair		Poor		Poor	
		Stone content	0.30	Depth to bedrock	0.00	Rock fragments	0.00
		Droughty	0.46	Cobble content	0.06	Slope	0.00
		Cobble content	0.82	Stone content	0.35	Depth to bedrock	0.99
		Too acid	0.84	Slope	0.92		
		Low content of organic matter	0.88				
		Depth to bedrock	0.99				
264:							
Scotties	85	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Droughty	0.44	Depth to bedrock	0.12	Rock fragments	0.00
						Hard to reclaim	0.00
265:							
Serene	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Rock fragments	0.00
		Too sandy	0.11	Cobble content	0.98	Depth to bedrock	0.10
		Low content of organic matter	0.12			Too sandy	0.11
		Too acid	0.74				
266:							
Serene	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.10	Slope	0.00	Rock fragments	0.00
		Too sandy	0.11	Cobble content	0.98	Depth to bedrock	0.10
		Low content of organic matter	0.12			Too sandy	0.11
		Too acid	0.74				
Rock outcrop	25	Not rated		Not rated		Not rated	
267:							
Serpen	85	Fair		Fair		Poor	
		Droughty	0.47	Slope	0.08	Slope	0.00
		Low content of organic matter	0.88	Depth to bedrock	0.39	Hard to reclaim	0.00
		Too clayey	0.98	Shrink-swell	0.87	Rock fragments	0.00
						Too clayey	0.70
268:							
Serpen	80	Fair		Poor		Poor	
		Droughty	0.47	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88	Depth to bedrock	0.39	Hard to reclaim	0.00
		Too clayey	0.98	Shrink-swell	0.87	Rock fragments	0.00
						Too clayey	0.70
269:							
Shadypass	80	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Too sandy	0.00
						Hard to reclaim	0.00
						Rock fragments	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
270:							
Shamel--------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.92
271:							
Shamel--------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.92
272:							
Shamel--------------	60	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim	0.92
Rock outcrop--------	20	Not rated		Not rated		Not rated	
273:							
Shaser--------------	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too clayey	0.98	Shrink-swell	0.94	Rock fragments	0.00
						Hard to reclaim	0.00
						Too clayey	0.57
Blewett-------------	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.00
274:							
Shaser--------------	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too clayey	0.98	Shrink-swell	0.94	Rock fragments	0.00
						Hard to reclaim	0.00
						Too clayey	0.57
Brisky--------------	40	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.00
275:							
Shaser--------------	60	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too clayey	0.98	Shrink-swell	0.94	Rock fragments	0.00
						Hard to reclaim	0.00
						Too clayey	0.57
Chapot--------------	20	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too clayey	0.98	Shrink-swell	0.98	Hard to reclaim	0.00
						Rock fragments	0.00
						Too clayey	0.57

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
276:							
Skipeak	80	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.82	Hard to reclaim	0.00
						Rock fragments	0.00
		Droughty	0.17			Slope	0.00
		Too sandy	0.22			Too sandy	0.22
		Too acid	0.74				
277:							
Skipeak	40	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.82	Hard to reclaim	0.00
						Rock fragments	0.00
		Droughty	0.17			Slope	0.00
		Too sandy	0.22			Too sandy	0.22
		Too acid	0.74				
Line	35	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.82	Hard to reclaim	0.00
		Low content of organic matter	0.12	Cobble content	0.89	Too sandy	0.00
						Hard to reclaim	0.00
		Droughty	0.40			Rock fragments	0.00
						Slope	0.00
278:							
Soda	80	Fair		Fair		Poor	
		Stone content	0.27	Stone content	0.61	Hard to reclaim	0.00
		Low content of organic matter	0.50	Slope	0.68	Slope	0.00
				Cobble content	0.93	Rock fragments	0.88
		Droughty	0.75				
		Too acid	0.95				
		Cobble content	0.98				
279:							
Soda	75	Fair		Poor		Poor	
		Stone content	0.27	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.62	Hard to reclaim	0.00
				Cobble content	0.65	Rock fragments	0.88
		Droughty	0.60				
		Cobble content	0.89				
		Too acid	0.95				
280:							
Soda	75	Fair		Poor		Poor	
		Stone content	0.14	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.32	Hard to reclaim	0.00
				Cobble content	0.79	Rock fragments	0.00
		Droughty	0.57				
		Cobble content	0.93				
		Too acid	0.95				
281:							
Soda	85	Fair		Fair		Poor	
		Stone content	0.13	Stone content	0.21	Rock fragments	0.00
				Slope	0.92	Hard to reclaim	0.00
						Slope	0.00

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
282:							
Soda----------------	85	Fair		Poor		Poor	
		Stone content	0.13	Slope	0.00	Slope	0.00
				Stone content	0.21	Rock fragments	0.00
						Hard to reclaim	0.00
283:							
Soda----------------	65	Fair		Poor		Poor	
		Stone content	0.13	Slope	0.00	Slope	0.00
				Stone content	0.21	Rock fragments	0.00
						Hard to reclaim	0.00
Rock outcrop--------	20	Not rated		Not rated		Not rated	
284:							
Soda----------------	60	Fair		Poor		Poor	
		Stone content	0.14	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.32	Hard to reclaim	0.00
		Droughty	0.57	Cobble content	0.79	Rock fragments	0.00
		Cobble content	0.93				
		Too acid	0.95				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
285:							
Soda----------------	40	Fair		Fair		Poor	
		Stone content	0.27	Stone content	0.61	Hard to reclaim	0.00
		Low content of organic matter	0.50	Slope	0.68	Slope	0.00
		Droughty	0.75	Cobble content	0.93	Rock fragments	0.88
		Too acid	0.95				
		Cobble content	0.98				
Soda, cold----------	35	Fair		Fair		Poor	
		Stone content	0.14	Stone content	0.32	Hard to reclaim	0.00
		Low content of organic matter	0.50	Slope	0.68	Rock fragments	0.00
		Droughty	0.57	Cobble content	0.79	Slope	0.00
		Cobble content	0.93				
		Too acid	0.95				
286:							
Soda----------------	40	Fair		Poor		Poor	
		Stone content	0.27	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.61	Hard to reclaim	0.00
		Droughty	0.75	Cobble content	0.93	Rock fragments	0.88
		Too acid	0.95				
		Cobble content	0.98				
Soda, cold----------	35	Fair		Poor		Poor	
		Stone content	0.14	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.32	Hard to reclaim	0.00
		Droughty	0.57	Cobble content	0.79	Rock fragments	0.00
		Cobble content	0.93				
		Too acid	0.95				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
287:							
Soda	35	Fair		Poor		Poor	
		Stone content	0.14	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.32	Hard to reclaim	0.00
		Droughty	0.57	Cobble content	0.79	Rock fragments	0.00
		Cobble content	0.93				
		Too acid	0.95				
Soda, cold	30	Fair		Poor		Poor	
		Stone content	0.27	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.61	Hard to reclaim	0.00
		Droughty	0.75	Cobble content	0.93	Rock fragments	0.88
		Too acid	0.95				
		Cobble content	0.98				
Rock outcrop	15	Not rated		Not rated		Not rated	
288:							
Sodacreek	75	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Stone content	0.53	Depth to saturated zone	0.24	Rock fragments	0.00
				Stone content	0.80	Hard to reclaim	0.02
						Depth to saturated zone	0.24
289:							
Sodacreek	70	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Stone content	0.53	Depth to saturated zone	0.24	Rock fragments	0.00
				Stone content	0.80	Hard to reclaim	0.02
						Depth to saturated zone	0.24
Rock outcrop	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Water erosion	0.68	Slope	0.92	Slope	0.00
		Too acid	0.95				
Saska	30	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.92	Hard to reclaim	0.00
		Droughty	0.74	Slope	0.92	Slope	0.00
		Too acid	0.95				
291:							
Spodic Vitrixerands	50	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Slope	0.00
		Water erosion	0.68	Slope	0.00	Depth to saturated zone	0.00
		Too acid	0.95				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
291:							
Saska---------------	35	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.12	Cobble content	0.92	Hard to reclaim	0.00
				Slope	0.92	Slope	0.00
		Droughty	0.74				
		Too acid	0.95				
292:							
Stemilt-------------	80	Fair		Poor		Poor	
		Cobble content	0.27	Cobble content	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.50	Stone content	0.76	Rock fragments	0.00
				Slope	0.92	Slope	0.00
		Stone content	0.68	Shrink-swell	0.94	Too clayey	0.64
		Too clayey	0.98				
293:							
Stemilt-------------	80	Fair		Poor		Poor	
		Cobble content	0.27	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Cobble content	0.00	Hard to reclaim	0.00
				Stone content	0.76	Rock fragments	0.00
		Stone content	0.68	Shrink-swell	0.94	Too clayey	0.64
		Too clayey	0.98				
294:							
Surgh---------------	80	Fair		Fair		Poor	
		Low content of organic matter	0.12	Depth to bedrock	0.23	Hard to reclaim	0.00
				Slope	0.92	Rock fragments	0.00
		Droughty	0.53			Slope	0.00
		Too acid	0.97				
		Water erosion	0.99				
295:							
Surgh---------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.23	Hard to reclaim	0.00
		Droughty	0.53			Rock fragments	0.00
		Too acid	0.97				
		Water erosion	0.99				
296:							
Surgh---------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.23	Hard to reclaim	0.00
		Droughty	0.53			Rock fragments	0.00
		Too acid	0.97				
		Water erosion	0.99				
297:							
Surgh---------------	40	Poor		Poor		Poor	
		Stone content	0.00	Stone content	0.00	Rock fragments	0.00
		Low content of organic matter	0.88	Cobble content	0.64	Hard to reclaim	0.00
				Slope	0.68	Slope	0.00
		Cobble content	0.99				
Wedge---------------	40	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.68	Hard to reclaim	0.00
						Rock fragments	0.00
		Droughty	0.49			Slope	0.00
		Too acid	0.68				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
298:							
Swakane-------------	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.99			Depth to bedrock	0.00
299:							
Swakane-------------	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.99			Depth to bedrock	0.00
300:							
Swakane-------------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.88	Stone content	0.99	Depth to bedrock	0.00
		Stone content	0.95				
Rock outcrop--------	25	Not rated		Not rated		Not rated	
301:							
Swakane-------------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.99			Depth to bedrock	0.00
Rock outcrop--------	35	Not rated		Not rated		Not rated	
302:							
Switchback----------	80	Fair		Poor		Poor	
		Droughty	0.01	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.21	Slope	0.92	Rock fragments	0.12
		Low content of organic matter	0.88			Depth to bedrock	0.21
303:							
Switchback----------	80	Fair		Poor		Poor	
		Droughty	0.01	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.21	Slope	0.00	Rock fragments	0.12
		Low content of organic matter	0.88			Depth to bedrock	0.21
304:							
Switchback----------	75	Fair		Poor		Poor	
		Droughty	0.01	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.21	Slope	0.00	Rock fragments	0.12
		Low content of organic matter	0.88			Depth to bedrock	0.21
305:							
Taneum--------------	85	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Shrink-swell	0.93	Hard to reclaim	0.00
		Water erosion	0.99	Depth to bedrock	0.99	Rock fragments	0.50

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
306:							
Thow	80	Poor		Fair		Poor	
		Wind erosion	0.00	Slope	0.68	Rock fragments	0.00
		Low content of organic matter	0.12			Hard to reclaim	0.00
						Slope	0.00
		Droughty	0.78				
307:							
Thow	80	Poor		Poor		Poor	
		Wind erosion	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
						Hard to reclaim	0.00
		Droughty	0.78				
308:							
Thow	80	Poor		Poor		Poor	
		Wind erosion	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
						Hard to reclaim	0.00
		Droughty	0.78				
309:							
Thow	30	Poor		Poor		Poor	
		Wind erosion	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
						Hard to reclaim	0.00
		Droughty	0.78				
Domkey	30	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.16	Rock fragments	0.00
		Droughty	0.56			Hard to reclaim	0.08
Rock outcrop	20	Not rated		Not rated		Not rated	
310:							
Thowson	85	Poor		Good		Poor	
		Wind erosion	0.00			Hard to reclaim	0.00
		Water erosion	0.99			Rock fragments	0.03
311:							
Thowson	85	Poor		Good		Poor	
		Wind erosion	0.00			Hard to reclaim	0.00
		Water erosion	0.99			Rock fragments	0.03
						Slope	0.37
312:							
Thowson	85	Poor		Fair		Poor	
		Wind erosion	0.00	Slope	0.08	Slope	0.00
		Water erosion	0.99			Hard to reclaim	0.00
						Rock fragments	0.03
313:							
Thowson	85	Poor		Poor		Poor	
		Wind erosion	0.00	Slope	0.00	Slope	0.00
		Water erosion	0.99			Hard to reclaim	0.00
						Rock fragments	0.03

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
314:							
Thowson-------------	75	Fair		Poor		Poor	
		Water erosion	0.99	Slope	0.00	Slope	0.00
						Hard to reclaim	0.00
						Rock fragments	0.28
315:							
Thowson-------------	60	Fair		Fair		Poor	
		Water erosion	0.99	Slope	0.68	Hard to reclaim	0.00
						Slope	0.00
						Rock fragments	0.28
Rock outcrop--------	15	Not rated		Not rated		Not rated	
316:							
Thowson-------------	60	Fair		Poor		Poor	
		Water erosion	0.99	Slope	0.00	Slope	0.00
						Hard to reclaim	0.00
						Rock fragments	0.28
Rock outcrop--------	15	Not rated		Not rated		Not rated	
317:							
Thowson-------------	50	Fair		Poor		Poor	
		Water erosion	0.99	Slope	0.00	Slope	0.00
						Hard to reclaim	0.00
						Rock fragments	0.28
Rock outcrop--------	30	Not rated		Not rated		Not rated	
318:							
Thowson, stony------	30	Fair		Poor		Poor	
		Water erosion	0.99	Slope	0.00	Slope	0.00
						Hard to reclaim	0.00
						Rock fragments	0.28
Thowson-------------	30	Poor		Poor		Poor	
		Wind erosion	0.00	Slope	0.00	Slope	0.00
		Water erosion	0.99			Hard to reclaim	0.00
						Rock fragments	0.03
Rock outcrop--------	15	Not rated		Not rated		Not rated	
319:							
Tillicum------------	75	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Rock fragments	0.00
		Droughty	0.48			Hard to reclaim	0.50
		Too acid	0.84				
320:							
Tillicum------------	85	Fair		Fair		Poor	
		Low content of organic matter	0.12	Depth to bedrock	0.04	Slope	0.00
				Slope	0.68	Hard to reclaim	0.50
		Droughty	0.70			Rock fragments	0.97
		Too acid	0.84				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
321:							
Tillicum	85	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Depth to bedrock	0.04	Hard to reclaim	0.50
		Droughty	0.70			Rock fragments	0.97
		Too acid	0.84				
322:							
Tillmont	75	Fair		Fair		Poor	
		Droughty	0.44	Depth to bedrock	0.23	Hard to reclaim	0.00
		Low content of	0.88	Slope	0.68	Rock fragments	0.00
		organic matter				Slope	0.00
323:							
Tillmont	75	Fair		Poor		Poor	
		Droughty	0.44	Slope	0.00	Slope	0.00
		Low content of	0.88	Depth to bedrock	0.23	Hard to reclaim	0.00
		organic matter				Rock fragments	0.00
324:							
Tillmont	40	Fair		Poor		Poor	
		Droughty	0.44	Slope	0.00	Slope	0.00
		Low content of	0.88	Depth to bedrock	0.23	Hard to reclaim	0.00
		organic matter				Rock fragments	0.00
Inkler	35	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Low content of	0.12	Depth to bedrock	0.12	Hard to reclaim	0.00
		organic matter		Stone content	0.99	Rock fragments	0.00
		Stone content	0.99				
325:							
Tiptop	85	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Cobble content	0.21	Hard to reclaim	0.00
		Cobble content	0.92			Rock fragments	0.00
		Too acid	0.95				
		Droughty	0.98				
326:							
Tiptop	40	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter		Cobble content	0.21	Hard to reclaim	0.00
		Cobble content	0.92			Rock fragments	0.00
		Too acid	0.95				
		Droughty	0.98				
Naxing	35	Fair		Poor		Poor	
		Stone content	0.03	Slope	0.00	Slope	0.00
		Low content of	0.12	Cobble content	0.00	Rock fragments	0.00
		organic matter		Stone content	0.01	Hard to reclaim	0.00
		Droughty	0.47				
		Too acid	0.74				
		Cobble content	0.74				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
327:							
Totem	85	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.82	Hard to reclaim	0.00
		Too acid	0.54			Slope	0.00
		Droughty	0.95			Rock fragments	0.50
328:							
Totem	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too acid	0.54			Hard to reclaim	0.00
		Droughty	0.95			Rock fragments	0.50
329:							
Totem	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too acid	0.54			Hard to reclaim	0.00
		Droughty	0.95			Rock fragments	0.50
330:							
Totem	60	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too acid	0.54			Hard to reclaim	0.00
		Droughty	0.95			Rock fragments	0.50
Chiwaukum	20	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Stone content	0.23	Stone content	0.53	Hard to reclaim	0.00
		Droughty	0.37	Cobble content	0.78	Rock fragments	0.00
		Too acid	0.74				
		Cobble content	0.95				
331:							
Treen	80	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.84				
332:							
Treen	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.84				
Klapatche	30	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.00	Slope	0.00	Rock fragments	0.00
		Too sandy	0.30	Cobble content	0.81	Too sandy	0.30
		Too acid	0.54			Depth to bedrock	0.97
		Low content of organic matter	0.88				
		Depth to bedrock	0.97				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
333:							
Tronsen-------------	80	Poor		Fair		Poor	
		Too clayey	0.00	Shrink-swell	0.41	Hard to reclaim	0.00
		Low content of organic matter	0.12	Slope	0.68	Rock fragments	0.00
				Stone content	0.99	Too clayey	0.00
		Stone content	0.99	Cobble content	0.99	Slope	0.00
334:							
Tronsen-------------	80	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.12	Shrink-swell	0.41	Hard to reclaim	0.00
				Stone content	0.99	Rock fragments	0.00
		Stone content	0.99	Cobble content	0.99	Too clayey	0.00
335:							
Tyee----------------	75	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.00	Slope	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00			Rock fragments	0.00
		Low content of organic matter	0.88				
336:							
Tyee----------------	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.92	Rock fragments	0.00
						Slope	0.00
337:							
Tyee----------------	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
						Rock fragments	0.00
338:							
Tyee----------------	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
						Rock fragments	0.00
Bisping-------------	30	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
						Rock fragments	0.00
		Water erosion	0.99				
339:							
Typic Cryaquands----	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim	0.00
						Rock fragments	0.00
		Too acid	0.54			Depth to saturated zone	0.00
		Water erosion	0.99				
						Hard to reclaim	0.00
340:							
Vabbing-------------	80	Fair		Fair		Poor	
		Stone content	0.05	Stone content	0.76	Rock fragments	0.00
		Low content of organic matter	0.50	Slope	0.92	Hard to reclaim	0.00
						Slope	0.00
		Too acid	0.95				
		Droughty	0.95				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
341:							
Vabbing	80	Fair		Poor		Poor	
		Stone content	0.05	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.76	Rock fragments	0.00
						Hard to reclaim	0.00
		Too acid	0.95				
		Droughty	0.95				
342:							
Vabbing	40	Fair		Poor		Poor	
		Stone content	0.05	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.76	Rock fragments	0.00
						Hard to reclaim	0.00
		Too acid	0.95				
		Droughty	0.95				
Gilpar	35	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.89	Hard to reclaim	0.00
		Too acid	0.74	Stone content	0.96	Rock fragments	0.00
		Droughty	0.86				
		Stone content	0.98				
343:							
Vabbing	70	Fair		Poor		Poor	
		Stone content	0.05	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Stone content	0.76	Rock fragments	0.00
						Hard to reclaim	0.00
		Too acid	0.95				
		Droughty	0.95				
Rock outcrop	20	Not rated		Not rated		Not rated	
344:							
Vabus	75	Poor		Fair		Poor	
		Droughty	0.00	Depth to saturated zone	0.14	Rock fragments	0.00
		Too acid	0.54			Slope	0.00
		Low content of organic matter	0.88	Cobble content	0.90	Depth to saturated zone	0.14
				Slope	0.92		
						Too acid	0.98
345:							
Vabus	75	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.54	Depth to saturated zone	0.14	Rock fragments	0.00
		Low content of organic matter	0.88			Depth to saturated zone	0.14
				Cobble content	0.90		
						Too acid	0.98
346:							
Vabus	40	Poor		Fair		Poor	
		Droughty	0.00	Depth to saturated zone	0.14	Rock fragments	0.00
		Too acid	0.54			Slope	0.00
		Low content of organic matter	0.88	Cobble content	0.90	Depth to saturated zone	0.14
				Slope	0.92		
						Too acid	0.98

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
346:							
Chinkmin	35	Fair		Fair		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.80	Rock fragments	0.00
		Too acid	0.50	Slope	0.92	Slope	0.00
		Droughty	0.60	Cobble content	0.98	Depth to saturated zone	0.80
347:							
Vabus	40	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.54	Depth to saturated zone	0.14	Rock fragments	0.00
		Low content of organic matter	0.88	Cobble content	0.90	Depth to saturated zone	0.14
						Too acid	0.98
Chinkmin	35	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to saturated zone	0.80	Rock fragments	0.00
		Droughty	0.60	Cobble content	0.98	Depth to saturated zone	0.80
348:							
Varelum	85	Fair		Fair		Good	
		Low content of organic matter	0.50	Depth to bedrock	0.04		
		Water erosion	0.99	Shrink-swell	0.97		
349:							
Varelum	85	Fair		Fair		Fair	
		Low content of organic matter	0.50	Depth to bedrock	0.04	Slope	0.37
		Water erosion	0.99	Shrink-swell	0.97		
350:							
Varelum	85	Fair		Fair		Poor	
		Low content of organic matter	0.50	Depth to bedrock	0.04	Slope	0.00
		Water erosion	0.99	Slope	0.08		
				Shrink-swell	0.97		
351:							
Varelum	80	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Water erosion	0.99	Depth to bedrock	0.04		
				Shrink-swell	0.97		
352:							
Vitricryands	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.21	Slope	0.00	Rock fragments	0.00
		Too acid	0.84			Depth to bedrock	0.21
		Low content of organic matter	0.88				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
353:							
Vitricryands	45	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.21	Slope	0.00	Rock fragments	0.00
		Too acid	0.84			Depth to bedrock	0.21
		Low content of organic matter	0.88				
Rock outcrop	30	Not rated		Not rated		Not rated	
354:							
Wagberg	80	Fair		Fair		Poor	
		Low content of organic matter	0.88	Cobble content	0.76	Rock fragments	0.00
				Slope	0.82	Hard to reclaim	0.00
		Stone content	0.99	Stone content	0.99	Slope	0.00
		Droughty	0.99				
355:							
Wagberg	80	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Cobble content	0.76	Rock fragments	0.00
		Stone content	0.99	Stone content	0.99	Hard to reclaim	0.00
		Droughty	0.99				
356:							
Wagberg	40	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Cobble content	0.82	Rock fragments	0.00
		Stone content	0.99	Stone content	0.99	Hard to reclaim	0.00
Wagberg, south	40	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Cobble content	0.76	Rock fragments	0.00
		Stone content	0.97	Stone content	0.92	Hard to reclaim	0.00
		Droughty	0.99				
357:							
Wagberg	30	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Cobble content	0.76	Rock fragments	0.00
		Stone content	0.99	Stone content	0.99	Hard to reclaim	0.00
		Droughty	0.99				
Swakane	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Stone content	0.99			Depth to bedrock	0.00
Rock outcrop	20	Not rated		Not rated		Not rated	
358:							
Wedge	80	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.68	Hard to reclaim	0.00
						Rock fragments	0.00
		Droughty	0.49			Slope	0.00
		Too acid	0.68				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
359:							
Wedge---------------	80	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter				Hard to reclaim	0.00
		Droughty	0.49			Rock fragments	0.00
		Too acid	0.68				
360:							
Wedge---------------	80	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.68	Too sandy	0.00
		Low content of	0.12			Hard to reclaim	0.00
		organic matter				Rock fragments	0.00
		Droughty	0.25			Slope	0.00
		Too acid	0.68				
361:							
Wedge---------------	80	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of	0.12			Too sandy	0.00
		organic matter				Hard to reclaim	0.00
		Droughty	0.25			Rock fragments	0.00
		Too acid	0.68				
362:							
Wedge---------------	60	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Low content of	0.12			Hard to reclaim	0.00
		organic matter				Rock fragments	0.00
		Droughty	0.25				
		Too acid	0.68				
Typic Cryaquands----	30	Fair		Poor		Poor	
		Low content of	0.12	Depth to	0.00	Hard to reclaim	0.00
		organic matter		saturated zone		Rock fragments	0.00
		Too acid	0.54			Depth to	0.00
		Water erosion	0.99			saturated zone	
						Hard to reclaim	0.00
363:							
Wedge---------------	50	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter				Hard to reclaim	0.00
		Droughty	0.49			Rock fragments	0.00
		Too acid	0.68				
Wedge, cold---------	30	Poor		Poor		Poor	
		Too sandy	0.00	Slope	0.00	Slope	0.00
		Low content of	0.12			Too sandy	0.00
		organic matter				Hard to reclaim	0.00
		Droughty	0.25			Rock fragments	0.00
		Too acid	0.68				
364:							
Wedgemont-----------	85	Fair		Poor		Poor	
		Low content of	0.12	Slope	0.00	Slope	0.00
		organic matter				Hard to reclaim	0.00
		Droughty	0.83			Rock fragments	0.00
		Too acid	0.99				

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
365:							
Wilma---------------	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.12	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.97			Depth to bedrock	0.97
366:							
Wilma---------------	75	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.12	Slope	0.00	Rock fragments	0.00
		Depth to bedrock	0.97			Depth to bedrock	0.97
Rock outcrop--------	15	Not rated		Not rated		Not rated	
367:							
Yaxing--------------	80	Fair		Fair		Fair	
		Low content of organic matter	0.12	Shrink-swell	0.96	Slope	0.37
		Water erosion	0.99				
368:							
Yaxing--------------	80	Fair		Poor		Poor	
		Low content of organic matter	0.12	Slope	0.00	Slope	0.00
		Water erosion	0.99	Shrink-swell	0.96		
369:							
Yaxon---------------	85	Fair		Fair		Fair	
		Low content of organic matter	0.50	Shrink-swell	0.91	Slope	0.37
		Water erosion	0.68				
370:							
Yaxon---------------	85	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.08	Slope	0.00
		Water erosion	0.68	Shrink-swell	0.91		
371:							
Yaxon---------------	85	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Water erosion	0.68	Shrink-swell	0.91		
372:							
Yaxon---------------	85	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Water erosion	0.68	Shrink-swell	0.91		
373:							
Yaxon---------------	85	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Water erosion	0.68	Shrink-swell	0.93		

Table 12.--Construction Materials--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
374:							
Zeb-----------------	75	Fair		Fair		Poor	
		Stone content	0.10	Stone content	0.68	Rock fragments	0.00
		Low content of organic matter	0.12	Slope	0.92	Hard to reclaim	0.00
						Slope	0.00
		Droughty	0.66				
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 13.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Aeric Fluvaquents---	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Piping	1.00		
				Seepage	1.00		
2:							
Almac---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Depth to water	1.00
		Slope	0.06				
3:							
Almac---------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Depth to water	1.00
		Slope	0.97				
4:							
Almac---------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Depth to water	1.00
		Slope	0.97				
5:							
Almac---------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Depth to water	1.00
		Slope	0.97				
Azwell--------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.95	Depth to water	1.00
		Depth to bedrock	0.95	Content of large stones	0.14		
		Seepage	0.70	Seepage	0.08		
6:							
Almac---------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Depth to water	1.00
		Slope	1.00				
Azwell--------------	25	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.95	Depth to water	1.00
		Depth to bedrock	0.95	Content of large stones	0.14		
		Seepage	0.70	Seepage	0.08		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
7:							
Almac---------------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Depth to water	1.00
		Slope	1.00				
Rock outcrop--------	25	Not rated		Not rated		Not rated	

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8:							
Alnult--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70	Seepage	0.56		
Reggad--------------	15	Very limited		Very limited		Very limited	
		Seepage	1.00	Content of large stones	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	1.00		
				Seepage	0.25		
9:							
Altapeak------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.06	Thin layer	0.03		
		Depth to bedrock	0.01				
10:							
Altapeak------------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.99	Thin layer	0.03		
		Depth to bedrock	0.01				
11:							
Altapeak------------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	1.00	Thin layer	0.03		
		Depth to bedrock	0.01				
12:							
Altapeak------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.97	Thin layer	0.16		
		Depth to bedrock	0.01				
13:							
Altapeak------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.97	Thin layer	0.16		
		Depth to bedrock	0.01				
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70	Seepage	0.56		
14:							
Altapeak------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	1.00	Thin layer	0.16		
		Depth to bedrock	0.01				
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70	Seepage	0.56		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
15:							
Altapeak------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.97	Thin layer	0.16		
		Depth to bedrock	0.01				
Alnult--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70	Seepage	0.56		
16:							
Anatone-------------	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Content of large stones	0.74		
Blewett-------------	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.25		
17:							
Anatone-------------	70	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Content of large stones	0.74		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
18:							
Andic Cryochrepts---	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.16	Depth to water	1.00
		Seepage	0.70				
19:							
Andic Cryumbrepts---	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.09	Depth to water	1.00
		Seepage	0.70				
20:							
Andic Cryumbrepts---	75	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.98	Thin layer	0.98	Depth to water	1.00
		Slope	0.97	Seepage	0.07		
		Seepage	0.70	Content of large stones	0.01		
21:							
Andic Cryumbrepts---	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.98	Depth to water	1.00
		Depth to bedrock	0.98	Seepage	0.07		
		Seepage	0.70	Content of large stones	0.01		
Haplocryods---------	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.08	Depth to water	1.00
		Seepage	0.70				
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
22:							
Andic Cryumbrepts---	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.99	Thin layer	0.98	Depth to water	1.00
		Depth to bedrock	0.98	Seepage	0.07		
		Seepage	0.70	Content of large stones	0.01		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
23:							
Andic Cryumbrepts---	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.98	Depth to water	1.00
		Slope	1.00	Seepage	0.09		
		Depth to bedrock	0.98				
Rock outcrop--------	30	Not rated		Not rated		Not rated	
24:							
Andic Haplumbrepts--	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.88	Depth to water	1.00
		Depth to bedrock	0.88	Seepage	0.07		
		Seepage	0.70				
Rock outcrop--------	30	Not rated		Not rated		Not rated	
25:							
Angle---------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00				
26:							
Aquic Cryumprepts---	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.89		
27:							
Ardening------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.37	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.01				
28:							
Ardenmont-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.37	Depth to water	1.00
		Slope	0.10	Thin layer	0.08		
		Depth to bedrock	0.01				
29:							
Ardenmont-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.37	Depth to water	1.00
		Seepage	0.70	Thin layer	0.08		
		Depth to bedrock	0.01				
30:							
Ardenmont-----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.37	Depth to water	1.00
		Seepage	0.70	Thin layer	0.08		
		Depth to bedrock	0.01				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
31:							
Ardenmont-----------	40	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.37	Depth to water	1.00
		Seepage	0.70	Thin layer	0.08		
		Depth to bedrock	0.01				
Swakane-------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.06		
				Content of large stones	0.01		
32:							
Ardenvoir-----------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.09	Depth to water	1.00
		Seepage	0.70	Thin layer	0.01		
		Depth to bedrock	0.01				
33:							
Ardenvoir-----------	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.09	Depth to water	1.00
		Seepage	0.70	Thin layer	0.01		
		Depth to bedrock	0.01				
34:							
Azwell--------------	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.95	Depth to water	1.00
		Depth to bedrock	0.95	Content of large stones	0.14		
		Seepage	0.70				
				Seepage	0.08		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
35:							
Bagmont-------------	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.56	Depth to water	1.00
		Seepage	0.70	Seepage	0.08		
		Depth to bedrock	0.02				
36:							
Bigcreek------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
37:							
Billyridge----------	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.09	Depth to water	1.00
38:							
Billyridge----------	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.09	Depth to water	1.00
		Slope	0.01				
39:							
Billyridge----------	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.09	Depth to water	1.00
		Slope	0.12				
40:							
Bisping-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.08	Depth to water	1.00

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
41:							
Bisping-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.08	Depth to water	1.00
		Slope	0.21				
42:							
Bisping-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.08	Depth to water	1.00
		Seepage	0.70				
43:							
Bjork---------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.99	Thin layer	0.98	Depth to water	1.00
		Seepage	0.70	Piping	0.52		
		Depth to bedrock	0.30				
44:							
Bjork---------------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.86	Depth to water	1.00
		Seepage	0.70	Piping	0.12		
		Depth to bedrock	0.11				
Rock outcrop--------	30	Not rated		Not rated		Not rated	
45:							
Blag----------------	45	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.10		
Cle Elum------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	0.99	Depth to water	1.00
		Seepage	0.70	Thin layer	0.95		
		Depth to bedrock	0.23				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
46:							
Blag----------------	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.10		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
47:							
Blewett-------------	65	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.25		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
48:							
Borland-------------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Piping	1.00		
49:							
Borland-------------	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Piping	1.00		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
49:							
Rock outcrop	20	Not rated		Not rated		Not rated	
50:							
Brief	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
51:							
Brisky	65	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97				
Rock outcrop	20	Not rated		Not rated		Not rated	
52:							
Burch	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
53:							
Burnscreek	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.23	Depth to water	1.00
		Slope	0.06	Seepage	0.09		
54:							
Burrant	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
55:							
Burrant	80	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.06				
56:							
Cashmont	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.24	Depth to water	1.00
57:							
Cashmont	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	0.06				
58:							
Chapot	90	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.05	Piping	0.97		
59:							
Chinkmin	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Depth to saturated zone	0.93	Cutbanks cave	1.00
		Slope	0.06	Thin layer	0.66	Slow refill	0.30
				Seepage	0.08	Depth to water	0.03

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
60:							
Chinkmin------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Depth to	0.93	Cutbanks cave	1.00
		Seepage	0.70	saturated zone		Slow refill	0.30
				Thin layer	0.66	Depth to water	0.03
				Seepage	0.08		
61:							
Chinkmin------------	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Depth to	0.93	Cutbanks cave	1.00
		Slope	0.06	saturated zone		Slow refill	0.30
				Thin layer	0.66	Depth to water	0.03
				Seepage	0.08		
Altapeak------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.06	Thin layer	0.16		
		Depth to bedrock	0.01				
62:							
Chinkmin------------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Depth to	0.93	Cutbanks cave	1.00
		Seepage	0.70	saturated zone		Slow refill	0.30
				Thin layer	0.66	Depth to water	0.03
				Seepage	0.08		
Altapeak------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.97	Thin layer	0.16		
		Depth to bedrock	0.01				
63:							
Chiwaukum-----------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.08	Depth to water	1.00
		Slope	0.06				
64:							
Chiwaukum-----------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large	0.14	Depth to water	1.00
		Seepage	0.70	stones			
				Seepage	0.08		
65:							
Chiwaukum-----------	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.08	Depth to water	1.00
		Slope	0.06				
66:							
Chiwaukum-----------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large	0.24	Depth to water	1.00
		Slope	0.10	stones			
				Seepage	0.08		
67:							
Chiwaukum-----------	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.08	Depth to water	1.00
		Slope	0.06				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
67:							
Chiwaukum, south----	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.08	Depth to water	1.00
		Slope	0.06				
68:							
Chiwaukum-----------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.08	Depth to water	1.00
		Seepage	0.70				
Chiwaukum, south----	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.08	Depth to water	1.00
		Seepage	0.70				
69:							
Chiwawa-------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
70:							
Choralmont, till substratum---------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.97				
Choralmont----------	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
71:							
Choralmont----------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.06				
72:							
Choralmont----------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
73:							
Choralmont----------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.06				
74:							
Choralmont----------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.97				
75:							
Choralmont----------	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
Limking-------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.24	Depth to water	1.00
		Slope	0.97	Thin layer	0.11		
		Depth to bedrock	0.10	Content of large stones	0.03		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
76:							
Chumstick-----------	75	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.06	Seepage	0.08		
				Content of large stones	0.07		
77:							
Chumstick-----------	75	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.08		
				Content of large stones	0.07		
78:							
Chumstick-----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.08		
				Content of large stones	0.07		
79:							
Cle Elum------------	85	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Piping	1.00	Depth to water	1.00
		Seepage	0.70	Thin layer	0.66		
		Depth to bedrock	0.03				
80:							
Cle Elum------------	75	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Piping	1.00	Depth to water	1.00
		Seepage	0.70	Thin layer	0.66		
		Depth to bedrock	0.03				
81:							
Coopmont------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.44	Depth to water	1.00
		Slope	0.06				
82:							
Coopmont------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.44	Depth to water	1.00
		Slope	0.97				
83:							
Cowiche-------------	45	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.02	Thin layer	0.11		
		Depth to bedrock	0.01				
Cowiche, very deep--	40	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.02	Seepage	0.09		
84:							
Cowiche-------------	50	Somewhat limited		Very limited		Very limited	
		Slope	0.99	Piping	1.00	Depth to water	1.00
		Seepage	0.70	Thin layer	0.11		
		Depth to bedrock	0.01				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
84:							
Cowiche, very deep--	30	Somewhat limited		Very limited		Very limited	
		Slope	0.99	Piping	1.00	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
85:							
Cryomont------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.95	Depth to water	1.00
				Content of large stones	0.25		
86:							
Cryomont------------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.95	Depth to water	1.00
		Slope	0.08	Content of large stones	0.29		
87:							
Cryomont------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.95	Depth to water	1.00
				Content of large stones	0.38		
Cryomont, fan-------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.95	Depth to water	1.00
		Slope	0.08	Content of large stones	0.39		
88:							
Culving-------------	65	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.12		
		Seepage	0.70				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
89:							
Culvop--------------	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97				
90:							
Devore--------------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.96	Depth to water	1.00
		Depth to bedrock	0.96	Content of large stones	0.93		
		Seepage	0.70				
				Seepage	0.10		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
91:							
Dinkelman-----------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.37	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.01				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
92:							
Dinkelman	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.37	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.01				
93:							
Dinkelman	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.37	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.01				
Rock outcrop	25	Not rated		Not rated		Not rated	
94:							
Dinkels	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.09	Depth to water	1.00
		Slope	0.01				
95:							
Dinkels	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.09	Depth to water	1.00
		Slope	0.21				
96:							
Dinkels	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Depth to water	1.00
		Slope	1.00				
97:							
Domkey	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.30	Depth to water	1.00
		Slope	0.08	Thin layer	0.26		
		Depth to bedrock	0.01				
98:							
Domkey	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.30	Depth to water	1.00
		Slope	0.97	Thin layer	0.26		
		Depth to bedrock	0.01				
99:							
Domkey	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.30	Depth to water	1.00
		Slope	0.97	Thin layer	0.26		
		Depth to bedrock	0.01				
McCree	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.89	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.01	Seepage	0.09		
				Thin layer	0.01		
100:							
Dragoon	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.98	Depth to water	1.00
		Seepage	0.70	Thin layer	0.98		
		Depth to bedrock	0.30				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101:							
Dragoon	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.97	Depth to water	1.00
		Seepage	0.70	Thin layer	0.93		
		Depth to bedrock	0.19				
102:							
Entiat	85	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.66	Seepage	0.09		
103:							
Entiat	60	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.66	Seepage	0.09		
Rock outcrop	25	Not rated		Not rated		Not rated	
104:							
Entic Haplumbrepts	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Content of large stones	1.00	Depth to water	1.00
		Slope	1.00				
		Depth to bedrock	0.46	Thin layer	0.46		
				Seepage	0.09		
105:							
Esmeralda	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.73	Depth to water	1.00
		Slope	0.97				
				Seepage	0.12		
106:							
Esmeralda	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.73	Depth to water	1.00
		Slope	1.00				
				Seepage	0.12		
Rock outcrop	35	Not rated		Not rated		Not rated	
107:							
Fears	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.25	Depth to water	1.00
		Slope	0.97				
				Seepage	0.12		
108:							
Fears	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.25	Depth to water	1.00
		Slope	0.97				
				Seepage	0.12		
Devore	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.96	Depth to water	1.00
		Depth to bedrock	0.96	Content of large stones	0.93		
		Seepage	0.70				
				Seepage	0.10		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
109:							
Fernow	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.06				
110:							
Fernow	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
111:							
Fernow	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
Serene	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.98	Depth to water	1.00
		Slope	0.97	Seepage	0.28		
		Depth to bedrock	0.30	Content of large stones	0.01		
112:							
Fluvaquents	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.10		
113:							
Georgecreek	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.91	Depth to water	1.00
		Depth to bedrock	0.01	Thin layer	0.37		
114:							
Georgecreek	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.91	Depth to water	1.00
		Slope	0.21	Thin layer	0.37		
		Depth to bedrock	0.01				
115:							
Georgecreek	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.91	Depth to water	1.00
		Seepage	0.70	Thin layer	0.37		
		Depth to bedrock	0.01				
116:							
Georgecreek	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.91	Depth to water	1.00
		Depth to bedrock	0.01	Thin layer	0.37		
Dragoon	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.98	Depth to water	1.00
		Depth to bedrock	0.30	Thin layer	0.98		
117:							
Georgecreek	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.96	Depth to water	1.00
		Slope	0.21	Thin layer	0.01		
		Depth to bedrock	0.01				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
117:							
Dragoon-------------	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.98	Depth to water	1.00
		Depth to bedrock	0.30	Thin layer	0.98		
		Slope	0.21				
118:							
Gilpar--------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.10	Depth to water	1.00
		Seepage	0.70	Content of large stones	0.01		
119:							
Gilpar--------------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.10	Depth to water	1.00
		Seepage	0.70	Content of large stones	0.01		
Nimue---------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.53	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.10		
120:							
Gilpar--------------	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.10	Depth to water	1.00
		Seepage	0.70	Content of large stones	0.01		
Nimue---------------	25	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.60	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.10		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
121:							
Gilpar--------------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.10	Depth to water	1.00
		Seepage	0.70	Content of large stones	0.01		
Rock outcrop--------	25	Not rated		Not rated		Not rated	
122:							
Glaciers, snowfields	90	Not rated		Not rated		Not rated	
123:							
Goffpeak------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.37	Depth to water	1.00
		Slope	0.97	Seepage	0.10		
		Depth to bedrock	0.37				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
124:							
Goffpeak------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.37	Depth to water	1.00
		Slope	0.97	Seepage	0.10		
		Depth to bedrock	0.37				
Fears---------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.25	Depth to water	1.00
		Slope	0.97				
				Seepage	0.12		
125:							
Haplocryods, cold---	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.96	Depth to water	1.00
		Depth to bedrock	0.96	Seepage	0.10		
		Slope	0.36				
Haplocryods, stony--	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.08	Depth to water	1.00
		Slope	0.36				
126:							
Haplocryods---------	40	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.09	Depth to water	1.00
		Seepage	1.00	Thin layer	0.06		
		Depth to bedrock	0.06				
Andic Cryochrepts---	20	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.16	Depth to water	1.00
		Seepage	0.70				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
127:							
Haploxerolls--------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.50	Depth to water	1.00
		Slope	0.24				
128:							
Haploxerolls--------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.50	Depth to water	1.00
		Slope	1.00				
129:							
Humicryods----------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.52	Depth to water	1.00
		Slope	0.06	Seepage	0.30		
		Depth to bedrock	0.01	Content of large stones	0.17		
Andic Cryumbrepts---	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.09	Depth to water	1.00
		Slope	0.06	Content of large stones	0.01		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
130:							
Humicryods----------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.52	Depth to water	1.00
		Slope	1.00	Seepage	0.30		
		Depth to bedrock	0.01	Content of large stones	0.17		
Andic Cryochrepts---	20	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.16	Depth to water	1.00
		Seepage	0.70				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
131:							
Humicryods----------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.52	Depth to water	1.00
		Slope	1.00	Seepage	0.30		
		Depth to bedrock	0.01	Content of large stones	0.17		
Andic Cryumbrepts---	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	1.00	Thin layer	0.08		
		Depth to bedrock	0.08				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
132:							
Hyprairie-----------	85	Somewhat limited		Very limited		Very limited	
		Slope	0.72	Piping	0.99	Depth to water	1.00
		Seepage	0.70				
133:							
Hyprairie-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	0.99	Depth to water	1.00
		Seepage	0.70				
134:							
Hyprairie-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	0.99	Depth to water	1.00
		Seepage	0.70				
Oldbutte------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Seepage	0.70				
135:							
Icicle, south-------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.88	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
Icicle--------------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.96	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
136:							
Icicle--------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.88	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
137:							
Icicle--------------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.96	Depth to water	1.00
		Slope	0.06	Seepage	0.10		
138:							
Icicle--------------	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.96	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
139:							
Icicle--------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.79	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
140:							
Icicle--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70	Thin layer	0.11		
		Depth to bedrock	0.10	Seepage	0.08		
Chumstick-----------	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.08		
				Content of large stones	0.07		
Rock outcrop--------	25	Not rated		Not rated		Not rated	
141:							
Icicle--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70	Thin layer	0.11		
		Depth to bedrock	0.10	Seepage	0.08		
Chumstick-----------	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.08		
				Content of large stones	0.07		
Rock outcrop--------	25	Not rated		Not rated		Not rated	
142:							
Inkler--------------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.29	Depth to water	1.00
		Slope	0.97	Seepage	0.08		
		Depth to bedrock	0.29				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
143:							
Isella--------------	40	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.06	Seepage	0.10		
Fernow--------------	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.06				
144:							
Isella--------------	40	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Piping	1.00	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
Fernow--------------	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
145:							
Isella--------------	40	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.06				
Nimue---------------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.53	Depth to water	1.00
		Slope	0.06	Seepage	0.10		
146:							
Isella--------------	40	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Piping	1.00	Depth to water	1.00
		Seepage	0.70				
Nimue---------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.60	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
147:							
Kingmont------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.31	Depth to water	1.00
		Seepage	0.70				
148:							
Kladnick------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
				Content of large stones	0.32		
149:							
Kladnick------------	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.06				
150:							
Kladnick------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
				Content of large stones	0.85		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
151:							
Klapatche-----------	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97	Thin layer	0.61		
		Depth to bedrock	0.02	Content of large stones	0.01		
Altapeak------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.97	Thin layer	0.03		
		Depth to bedrock	0.01				
152:							
Kloochman-----------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.74	Depth to water	1.00
		Depth to bedrock	0.74	Seepage	0.08		
		Slope	0.06				
153:							
Kloochman-----------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.74	Depth to water	1.00
		Slope	0.97	Seepage	0.08		
		Depth to bedrock	0.74				
154:							
Kloochman-----------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.74	Depth to water	1.00
		Slope	1.00	Seepage	0.08		
		Depth to bedrock	0.74				
155:							
Kloochman-----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.74	Depth to water	1.00
		Slope	0.97	Seepage	0.08		
		Depth to bedrock	0.74				
Inkler--------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.29	Depth to water	1.00
		Slope	0.97	Seepage	0.08		
		Depth to bedrock	0.29				
156:							
Kloochman-----------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.66	Depth to water	1.00
		Slope	1.00	Seepage	0.08		
		Depth to bedrock	0.66				
Inkler--------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.29	Depth to water	1.00
		Slope	1.00	Seepage	0.08		
		Depth to bedrock	0.29				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
157:							
Kloochman-----------	70	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.66	Depth to water	1.00
		Slope	1.00	Seepage	0.08		
		Depth to bedrock	0.66				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157:							
Rock outcrop	15	Not rated		Not rated		Not rated	
158:							
Limking	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97	Thin layer	0.01		
		Depth to bedrock	0.01				
159:							
Limking	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97	Thin layer	0.01		
		Depth to bedrock	0.01				
Coopmont	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.44	Depth to water	1.00
		Slope	0.97				
160:							
Limking	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97	Thin layer	0.01		
		Depth to bedrock	0.01				
Coopmont	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.44	Depth to water	1.00
		Slope	0.97				
161:							
Limking	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97	Thin layer	0.01		
		Depth to bedrock	0.01				
Coopmont	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.44	Depth to water	1.00
		Slope	0.97				
Rock outcrop	20	Not rated		Not rated		Not rated	
162:							
Limking	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97	Thin layer	0.01		
		Depth to bedrock	0.01				
Rock outcrop	20	Not rated		Not rated		Not rated	
163:							
Line	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Depth to water	1.00
		Slope	0.06				
164:							
Line	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Depth to water	1.00
		Slope	0.06				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
165:							
Line	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Depth to water	1.00
		Slope	0.97				
166:							
Line	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Depth to water	1.00
		Slope	0.06				
Vabbing	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.19	Depth to water	1.00
		Slope	0.06				
167:							
Loneridge	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.06	Content of large stones	0.13	Depth to water	1.00
168:							
Loneridge	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.04	Depth to water	1.00
		Slope	0.06				
169:							
Loneridge	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.99	Content of large stones	0.26	Depth to water	1.00
170:							
Macreeing	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.33	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.16	Thin layer	0.16		
				Seepage	0.10		
171:							
Macreeing	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.33	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.16	Thin layer	0.16		
				Seepage	0.10		
172:							
Macreeing	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.33	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.16	Thin layer	0.16		
				Seepage	0.10		
Rock outcrop	30	Not rated		Not rated		Not rated	
173:							
Mansonia	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
174:							
Mansonia------------	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.11	Depth to water	1.00
		Slope	0.36	Seepage	0.10		
		Depth to bedrock	0.10				
Swakane-------------	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.36	Seepage	0.06		
				Content of large stones	0.01		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
175:							
Mansonia------------	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.11	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
		Depth to bedrock	0.10				
Swakane-------------	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.10		
				Content of large stones	0.01		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
176:							
Marmont-------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
177:							
Marmont-------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.21				
178:							
Marmont-------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00				
179:							
McCree--------------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.89	Depth to water	1.00
		Slope	0.10				
		Depth to bedrock	0.01	Seepage	0.09		
				Thin layer	0.01		
180:							
McCree--------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.89	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.01	Seepage	0.09		
				Thin layer	0.01		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
181:							
McCree--------------	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.89	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.01	Thin layer	0.01		
182:							
McCree--------------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.89	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.01	Thin layer	0.01		
Palmich-------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.09	Depth to water	1.00
		Seepage	0.70				
183:							
McCree--------------	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.89	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.01	Thin layer	0.01		
Palmont-------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	1.00				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
184:							
McCree--------------	55	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.89	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.01	Thin layer	0.01		
Rock outcrop--------	25	Not rated		Not rated		Not rated	
185:							
Mippon--------------	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.23	Content of large stones	0.01
				Content of large stones	0.01		
186:							
Mippon--------------	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.25	Content of large stones	0.05
				Content of large stones	0.05		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
187:							
Mippon	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Content of large stones	0.42	Content of large stones	0.42
				Seepage	0.27		
188:							
Morical	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.61	Depth to water	1.00
		Depth to bedrock	0.02	Seepage	0.03		
189:							
Morical	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.61	Depth to water	1.00
		Slope	0.21	Seepage	0.03		
		Depth to bedrock	0.02				
190:							
Morical	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.66	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.03				
191:							
Morical	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.61	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.02				
Dragoon	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.97	Depth to water	1.00
		Seepage	0.70	Thin layer	0.93		
		Depth to bedrock	0.19				
192:							
Morical	65	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.61	Depth to water	1.00
		Slope	0.06	Seepage	0.03		
		Depth to bedrock	0.02				
Dragoon	20	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.98	Depth to water	1.00
		Depth to bedrock	0.30	Thin layer	0.98		
		Slope	0.06				
193:							
Morical	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.61	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.02				
Dragoon	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.98	Depth to water	1.00
		Seepage	0.70	Thin layer	0.98		
		Depth to bedrock	0.30				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
194:							
Morical	65	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.61	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.02				
Dragoon	20	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Seepage	0.70	Thin layer	1.00		
		Depth to bedrock	0.45	Seepage	0.08		
195:							
Mountaineer	75	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.56	Thin layer	0.56		
				Seepage	0.09		
196:							
Mountaineer	60	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.56	Thin layer	0.56		
				Seepage	0.09		
Rock outcrop	20	Not rated		Not rated		Not rated	
197:							
Mountaineer	35	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.56	Thin layer	0.56		
				Seepage	0.09		
Tillicum	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.37	Depth to water	1.00
		Slope	1.00	Seepage	0.10		
		Depth to bedrock	0.37				
Rock outcrop	15	Not rated		Not rated		Not rated	
198:							
Nahahum	80	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Piping	1.00	Depth to water	1.00
		Seepage	0.70				
199:							
Nahahum	50	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Piping	1.00	Depth to water	1.00
		Seepage	0.70				
Taneum	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.98	Depth to water	1.00
		Depth to bedrock	0.01	Thin layer	0.01		
200:							
Nard	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.06	Piping	0.28	Depth to water	1.00
		Seepage	0.05	Seepage	0.07		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
201:							
Nard	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.28	Depth to water	1.00
		Seepage	0.05	Seepage	0.07		
202:							
Nard	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.28	Depth to water	1.00
		Seepage	0.05	Seepage	0.07		
Blag	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.10		
203:							
Nard	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.28	Depth to water	1.00
		Seepage	0.05	Seepage	0.07		
Brisky	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97				
204:							
Nardine	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.05	Depth to saturated zone	1.00	Slow refill	0.95
						Cutbanks cave	0.10
				Piping	0.92		
205:							
Nardmont	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.97	Depth to water	1.00
		Slope	0.06				
206:							
Nardmont	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.97	Depth to water	1.00
		Seepage	0.70				
207:							
Natapoc	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.06	Content of large stones	0.34	Depth to water	1.00
		Seepage	0.05				
				Seepage	0.10		
208:							
Natapoc	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.34	Depth to water	1.00
		Seepage	0.05				
				Seepage	0.10		
209:							
Natapoc	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.34	Depth to water	1.00
		Seepage	0.05				
				Seepage	0.10		
Thow	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
210:							
Naxing--------------	75	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Content of large stones	1.00	Depth to water	1.00
		Slope	0.08				
211:							
Naxing--------------	75	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70				
212:							
Newbell-------------	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.10	Depth to water	1.00
		Seepage	0.05				
213:							
Nimue---------------	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.60	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.10		
214:							
Nimue---------------	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.53	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.10		
215:							
Nimue---------------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.60	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.10		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
216:							
Nimue---------------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.53	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.10		
Nimue, dry----------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.60	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.10		
217:							
Nimue, dry----------	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.60	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.10		
Nimue---------------	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.53	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.10		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
217:							
Rock outcrop	15	Not rated		Not rated		Not rated	
218:							
Oldbutte	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
219:							
Oldbutte	80	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	1.00	Depth to water	1.00
		Seepage	0.70				
220:							
Palmich	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.09	Depth to water	1.00
		Slope	0.21				
221:							
Palmich	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.09	Depth to water	1.00
		Seepage	0.70				
222:							
Palmich	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.09	Depth to water	1.00
		Seepage	0.70				
223:							
Palmich	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.09	Depth to water	1.00
		Seepage	0.70				
McCree	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.89	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.01	Seepage	0.09		
				Thin layer	0.01		
224:							
Palmich	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.09	Depth to water	1.00
		Seepage	0.70				
McCree	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.89	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.01	Seepage	0.09		
				Thin layer	0.01		
Rock outcrop	20	Not rated		Not rated		Not rated	
225:							
Palmich	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.09	Depth to water	1.00
		Seepage	0.70				
Rock outcrop	20	Not rated		Not rated		Not rated	

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
226:							
Palmont-------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97				
227:							
Palmont-------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	1.00				
228:							
Palmont-------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97				
229:							
Palmont-------------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	1.00				
Rock outcrop--------	30	Not rated		Not rated		Not rated	
230:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
231:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.08				
232:							
Ramparter-----------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
233:							
Ramparter-----------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00				
234:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.08				
235:							
Ramparter-----------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
236:							
Ramparter-----------	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
236:							
Wilma---------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.61	Depth to water	1.00
		Slope	0.97	Seepage	0.08		
		Depth to bedrock	0.61				
237:							
Reggad--------------	15	Very limited		Very limited		Very limited	
		Seepage	1.00	Content of large stones	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	1.00		
				Seepage	0.25		
238:							
Reggad--------------	15	Very limited		Very limited		Very limited	
		Seepage	1.00	Content of large stones	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	1.00		
				Seepage	0.25		
Serene--------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.98	Depth to water	1.00
		Slope	1.00	Seepage	0.28		
		Depth to bedrock	0.30	Content of large stones	0.01		
239:							
Rock outcrop--------	90	Not rated		Not rated		Not rated	
240:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Blewett-------------	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.25		
241:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Borland-------------	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Piping	1.00		
242:							
Rock outcrop--------	40	Not rated		Not rated		Not rated	
Chumstick-----------	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.08		
				Content of large stones	0.07		
Icicle--------------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70	Thin layer	0.11		
		Depth to bedrock	0.10	Seepage	0.08		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
243:							
Rock outcrop	40	Not rated		Not rated		Not rated	
Chumstick	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.08		
				Content of large stones	0.07		
Icicle	15	Very limited		Very limited		Very limited	
		Slope	1.00	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70				
		Depth to bedrock	0.10	Thin layer	0.11		
				Seepage	0.08		
244:							
Rock outcrop	60	Not rated		Not rated		Not rated	
Rubble land	20	Not rated		Not rated		Not rated	
Glaciers, snowfields	15	Not rated		Not rated		Not rated	
245:							
Rock outcrop	35	Not rated		Not rated		Not rated	
Rubble land	25	Not rated		Not rated		Not rated	
Serene	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.98	Depth to water	1.00
		Slope	1.00	Seepage	0.28		
		Depth to bedrock	0.30	Content of large stones	0.01		
246:							
Rubble land	65	Not rated		Not rated		Not rated	
Rock outcrop	20	Not rated		Not rated		Not rated	
247:							
Safety	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.98	Depth to water	1.00
		Depth to bedrock	0.30	Seepage	0.09		
		Slope	0.10				
248:							
Safety	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.98	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.30				
249:							
Safety	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.98	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.30				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
250:							
Safety	70	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.98	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.30				
Rock outcrop	15	Not rated		Not rated		Not rated	
251:							
Saska	75	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.45	Depth to water	1.00
		Slope	0.06	Seepage	0.09		
252:							
Saska	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.45	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
253:							
Saska	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.09	Depth to water	1.00
		Slope	0.06				
254:							
Saska	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.09	Depth to water	1.00
		Seepage	0.70				
255:							
Saska	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.42	Depth to water	1.00
		Slope	0.06	Seepage	0.09		
256:							
Saska	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.42	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
257:							
Saska	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.45	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
Rock outcrop	20	Not rated		Not rated		Not rated	
258:							
Saska	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.45	Depth to water	1.00
		Slope	0.06	Seepage	0.09		
Saska, bouldery	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.42	Depth to water	1.00
		Slope	0.06	Seepage	0.09		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
259:							
Saska, south	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.09	Depth to water	1.00
		Slope	0.06				
Saska	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.42	Depth to water	1.00
		Slope	0.06				
				Seepage	0.09		
260:							
Saska	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.45	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.09		
Saska, bouldery	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.42	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.09		
261:							
Saska	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.45	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.09		
Saska, bouldery	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.42	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.09		
Rock outcrop	15	Not rated		Not rated		Not rated	
262:							
Saska, south	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.09	Depth to water	1.00
		Seepage	0.70				
Saska	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.45	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.09		
Rock outcrop	15	Not rated		Not rated		Not rated	
263:							
Saydab	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.87	Depth to water	1.00
		Depth to bedrock	0.56				
		Slope	0.06	Thin layer	0.56		
264:							
Scotties	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.29	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.29				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
265:							
Serene	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.98	Depth to water	1.00
		Slope	0.97	Seepage	0.28		
		Depth to bedrock	0.30	Content of large stones	0.01		
266:							
Serene	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.98	Depth to water	1.00
		Slope	1.00	Seepage	0.28		
		Depth to bedrock	0.30	Content of large stones	0.01		
Rock outcrop	25	Not rated		Not rated		Not rated	
267:							
Serpen	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.21	Seepage	0.56	Depth to water	1.00
		Depth to bedrock	0.16	Thin layer	0.16		
268:							
Serpen	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.56	Depth to water	1.00
		Depth to bedrock	0.16	Thin layer	0.16		
269:							
Shadypass	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
270:							
Shamel	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.08	Depth to water	1.00
		Seepage	0.70				
271:							
Shamel	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.08	Depth to water	1.00
		Seepage	0.70				
272:							
Shamel	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.08	Depth to water	1.00
		Seepage	0.70				
Rock outcrop	20	Not rated		Not rated		Not rated	
273:							
Shaser	40	Somewhat limited		Not limited		Very limited	
		Slope	0.97			Depth to water	1.00
		Seepage	0.05				
Blewett	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.25		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
274:							
Shaser--------------	40	Somewhat limited		Not limited		Very limited	
		Slope	0.97			Depth to water	1.00
		Seepage	0.05				
Brisky--------------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97				
275:							
Shaser--------------	60	Somewhat limited		Not limited		Very limited	
		Slope	0.97			Depth to water	1.00
		Seepage	0.05				
Chapot--------------	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.06	Depth to water	1.00
		Seepage	0.70				
276:							
Skipeak-------------	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.08				
277:							
Skipeak-------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.22	Depth to water	1.00
		Slope	0.08				
Line----------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Depth to water	1.00
		Slope	0.08				
278:							
Soda----------------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.10	Depth to water	1.00
		Slope	0.10	Content of large stones	0.03		
279:							
Soda----------------	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.19	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
280:							
Soda----------------	75	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.18	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
281:							
Soda----------------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.11	Depth to water	1.00
		Slope	0.06	Seepage	0.08		
				Content of large stones	0.01		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
282:							
Soda----------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.11	Depth to water	1.00
		Seepage	0.70	Seepage	0.08		
				Content of large stones	0.01		
283:							
Soda----------------	65	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.11	Depth to water	1.00
		Seepage	0.70	Seepage	0.08		
				Content of large stones	0.01		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
284:							
Soda----------------	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.18	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
Rock outcrop--------	20	Not rated		Not rated		Not rated	
285:							
Soda----------------	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.10	Depth to water	1.00
		Slope	0.10	Content of large stones	0.03		
Soda, cold----------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.18	Depth to water	1.00
		Slope	0.10	Seepage	0.10		
286:							
Soda----------------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.10	Depth to water	1.00
		Seepage	0.70	Content of large stones	0.03		
Soda, cold----------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.18	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
287:							
Soda----------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.18	Depth to water	1.00
		Seepage	0.70	Seepage	0.10		
Soda, cold----------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.10	Depth to water	1.00
		Seepage	0.70	Content of large stones	0.03		
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
288:							
Sodacreek-----------	75	Somewhat limited		Very limited		Very limited	
		Slope	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Seepage	0.70	Seepage	0.08	Slow refill	0.30
289:							
Sodacreek-----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Seepage	0.70	Seepage	0.08	Slow refill	0.30
Rock outcrop--------	15	Not rated		Not rated		Not rated	
290:							
Spodic Vitrixerands	60	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Cutbanks cave	0.10
		Slope	0.06	Piping	1.00		
				Seepage	0.49		
Saska---------------	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.45	Depth to water	1.00
		Slope	0.06	Seepage	0.09		
291:							
Spodic Vitrixerands	50	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.97	Depth to saturated zone	1.00	Cutbanks cave	0.10
		Seepage	0.70	Piping	1.00		
				Seepage	0.49		
Saska---------------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.45	Depth to water	1.00
		Slope	0.06	Seepage	0.09		
292:							
Stemilt-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.06	Content of large stones	0.85	Depth to water	1.00
		Seepage	0.05				
293:							
Stemilt-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.85	Depth to water	1.00
		Seepage	0.05				
294:							
Surgh---------------	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.22	Depth to water	1.00
		Depth to bedrock	0.22	Seepage	0.19		
		Slope	0.06				
295:							
Surgh---------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.22	Depth to water	1.00
		Seepage	0.70	Seepage	0.19		
		Depth to bedrock	0.22				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
296:							
Surgh	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.22	Depth to water	1.00
		Seepage	0.70	Seepage	0.19		
		Depth to bedrock	0.22				
297:							
Surgh	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Content of large stones	0.77	Depth to water	1.00
		Slope	0.10	Seepage	0.09		
Wedge	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.10				
298:							
Swakane	75	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.06		
				Content of large stones	0.01		
299:							
Swakane	75	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.06		
				Content of large stones	0.01		
300:							
Swakane	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.09		
				Content of large stones	0.01		
Rock outcrop	25	Not rated		Not rated		Not rated	
301:							
Swakane	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.06		
				Content of large stones	0.01		
Rock outcrop	35	Not rated		Not rated		Not rated	
302:							
Switchback	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Thin layer	0.95	Depth to water	1.00
		Depth to bedrock	0.23	Seepage	0.09		
		Slope	0.06				
303:							
Switchback	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.95	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.23				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
304:							
Switchback	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.95	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.23				
305:							
Taneum	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.98	Depth to water	1.00
		Depth to bedrock	0.01	Thin layer	0.01		
306:							
Thow	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.10				
307:							
Thow	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97				
308:							
Thow	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	1.00				
309:							
Thow	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97				
Domkey	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.30	Depth to water	1.00
		Slope	0.97	Thin layer	0.26		
		Depth to bedrock	0.01				
Rock outcrop	20	Not rated		Not rated		Not rated	
310:							
Thowson	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.41	Depth to water	1.00
311:							
Thowson	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.41	Depth to water	1.00
		Slope	0.01				
312:							
Thowson	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.41	Depth to water	1.00
		Slope	0.21				
313:							
Thowson	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.41	Depth to water	1.00
		Slope	0.97				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
314:							
Thowson-------------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	0.97				
315:							
Thowson-------------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	0.10				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
316:							
Thowson-------------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	0.97				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
317:							
Thowson-------------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	1.00				
Rock outcrop--------	30	Not rated		Not rated		Not rated	
318:							
Thowson, stony------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	0.97				
Thowson-------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.41	Depth to water	1.00
		Slope	0.97				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
319:							
Tillicum------------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.46	Depth to water	1.00
		Slope	0.97	Seepage	0.10		
		Depth to bedrock	0.46				
320:							
Tillicum------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.37	Depth to water	1.00
		Depth to bedrock	0.37	Seepage	0.10		
		Slope	0.10				
321:							
Tillicum------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.37	Depth to water	1.00
		Slope	0.97	Seepage	0.10		
		Depth to bedrock	0.37				
322:							
Tillmont------------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.22	Depth to water	1.00
		Depth to bedrock	0.22	Seepage	0.10		
		Slope	0.10				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
323:							
Tillmont------------	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.22	Depth to water	1.00
		Slope	0.97	Seepage	0.10		
		Depth to bedrock	0.22				
324:							
Tillmont------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.22	Depth to water	1.00
		Slope	0.97	Seepage	0.10		
		Depth to bedrock	0.22				
Inkler--------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.29	Depth to water	1.00
		Slope	0.97	Seepage	0.08		
		Depth to bedrock	0.29				
325:							
Tiptop--------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.38	Depth to water	1.00
		Seepage	0.70	Content of large stones	0.14		
326:							
Tiptop--------------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.38	Depth to water	1.00
		Seepage	0.70	Content of large stones	0.14		
Naxing--------------	35	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Content of large stones	1.00	Depth to water	1.00
		Seepage	0.70				
327:							
Totem---------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.08				
328:							
Totem---------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
329:							
Totem---------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00				
330:							
Totem---------------	60	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
Chiwaukum-----------	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.14	Depth to water	1.00
		Seepage	0.70				
				Seepage	0.08		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
331:							
Treen	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.10		
332:							
Treen	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.10		
Klapatche	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.61		
		Depth to bedrock	0.02	Content of large stones	0.01		
333:							
Tronsen	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.19	Depth to water	1.00
		Slope	0.10				
334:							
Tronsen	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.19	Depth to water	1.00
		Seepage	0.70				
335:							
Tyee	75	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.78				
336:							
Tyee	85	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.50	Thin layer	1.00	Depth to water	1.00
		Slope	0.06	Seepage	0.10		
337:							
Tyee	75	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.50	Seepage	0.10		
338:							
Tyee	45	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	0.50	Seepage	0.10		
Bisping	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.08	Depth to water	1.00
		Seepage	0.70				
339:							
Typic Cryaquands	80	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
				Seepage	0.08		
340:							
Vabbing	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.19	Depth to water	1.00
		Slope	0.06				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
341:							
Vabbing-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.19	Depth to water	1.00
		Seepage	0.70				
342:							
Vabbing-------------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.19	Depth to water	1.00
		Seepage	0.70				
Gilpar--------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Seepage	0.10	Depth to water	1.00
		Seepage	0.70	Content of large stones	0.01		
343:							
Vabbing-------------	70	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.19	Depth to water	1.00
		Seepage	0.70				
Rock outcrop--------	20	Not rated		Not rated		Not rated	
344:							
Vabus---------------	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Slope	0.06			Content of large stones	0.01
				Thin layer	0.66		
				Seepage	0.10		
				Content of large stones	0.01		
345:							
Vabus---------------	75	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Slope	0.97			Content of large stones	0.01
				Thin layer	0.66		
				Seepage	0.10		
				Content of large stones	0.01		
346:							
Vabus---------------	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Slope	0.06			Content of large stones	0.01
				Thin layer	0.66		
				Seepage	0.10		
				Content of large stones	0.01		
Chinkmin------------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Depth to saturated zone	0.93	Cutbanks cave	1.00
		Slope	0.06			Slow refill	0.30
				Thin layer	0.66	Depth to water	0.03
				Seepage	0.08		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
347:							
Vabus	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Slope	0.97			Content of large stones	0.01
				Thin layer	0.66		
				Seepage	0.10		
				Content of large stones	0.01		
Chinkmin	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Depth to saturated zone	0.93	Cutbanks cave	1.00
		Seepage	0.70			Slow refill	0.30
				Thin layer	0.66	Depth to water	0.03
				Seepage	0.08		
348:							
Varelum	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.01	Thin layer	0.37		
349:							
Varelum	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.01	Thin layer	0.37		
		Depth to bedrock	0.01				
350:							
Varelum	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Depth to water	1.00
		Slope	0.21	Thin layer	0.37		
		Depth to bedrock	0.01				
351:							
Varelum	80	Somewhat limited		Very limited		Very limited	
		Slope	0.97	Piping	1.00	Depth to water	1.00
		Seepage	0.70	Thin layer	0.37		
		Depth to bedrock	0.01				
352:							
Vitricryands	75	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.95	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.23				
353:							
Vitricryands	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.95	Depth to water	1.00
		Seepage	0.70	Seepage	0.09		
		Depth to bedrock	0.23				
Rock outcrop	30	Not rated		Not rated		Not rated	
354:							
Wagberg	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.08	Content of large stones	0.02		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
355:							
Wagberg	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.97	Content of large stones	0.02		
356:							
Wagberg	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Depth to water	1.00
		Slope	0.99	Content of large stones	0.01		
Wagberg, south	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	0.99	Content of large stones	0.05		
357:							
Wagberg	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.27	Depth to water	1.00
		Slope	1.00	Content of large stones	0.02		
Swakane	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.06		
				Content of large stones	0.01		
Rock outcrop	20	Not rated		Not rated		Not rated	
358:							
Wedge	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.10				
359:							
Wedge	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
360:							
Wedge	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.10				
361:							
Wedge	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
362:							
Wedge	60	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
Typic Cryaquands	30	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
				Seepage	0.07		

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
363:							
Wedge	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
Wedge, cold	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	0.97				
364:							
Wedgemont	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
		Slope	0.97				
365:							
Wilma	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.61	Depth to water	1.00
		Slope	0.97	Seepage	0.08		
		Depth to bedrock	0.61				
366:							
Wilma	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.61	Depth to water	1.00
		Slope	0.97	Seepage	0.08		
		Depth to bedrock	0.61				
Rock outcrop	15	Not rated		Not rated		Not rated	
367:							
Yaxing	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.23	Depth to water	1.00
		Slope	0.01				
368:							
Yaxing	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.23	Depth to water	1.00
		Seepage	0.70				
369:							
Yaxon	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.05	Piping	0.88	Depth to water	1.00
		Slope	0.01				
370:							
Yaxon	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.21	Piping	0.88	Depth to water	1.00
		Seepage	0.05				
371:							
Yaxon	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.82	Piping	0.88	Depth to water	1.00
		Seepage	0.05				
372:							
Yaxon	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.88	Depth to water	1.00
		Seepage	0.05				

Table 13.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
373:							
Yaxon	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.85	Depth to water	1.00
		Seepage	0.05				
374:							
Zeb	75	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Depth to water	1.00
		Slope	0.06				
W:							
Water	100	Not rated		Not rated		Not rated	

Table 14.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
1: Aeric Fluvaquents----	0-8	Silt loam	ML	A-4	0	0	100	90-100	80-100	65-90	25-35	NP-5
	8-27	Silt loam, loam, clay loam	CL-ML, ML	A-4	0	0	100	90-100	75-100	55-90	25-40	5-10
	27-36	Sandy loam, loam, clay loam	CL-ML, ML, SM	A-2, A-4, A-6	0	0	85-100	75-90	50-90	25-70	20-40	5-15
	36-60	Sand, clay loam, gravelly sand	CL-ML, ML, SM, SP-SM	A-1, A-2, A-4, A-6	0	0	85-100	70-90	35-90	5-70	15-40	NP-15
2: Almac-----------	0-3	Fine sandy loam	SM	A-4	0	0	95-100	80-100	55-80	35-50	25-35	NP-5
	3-23	Fine sandy loam, sandy loam, gravelly sandy loam	ML, SM	A-2, A-4	0	0	85-100	70-100	45-85	25-55	25-35	NP-5
	23-50	Loam, gravelly loam, gravelly sandy loam	ML, SM	A-1, A-2, A-4	0	0-5	65-95	50-85	35-80	20-65	20-30	NP-5
	50-63	Gravelly fine sandy loam, very gravelly sandy loam, very flaggy sandy loam	GM, SM	A-1, A-2	0-5	0-25	55-85	35-65	25-50	15-35	15-20	NP-5
3: Almac-----------	0-3	Fine sandy loam	SM	A-4	0	0	95-100	80-100	55-80	35-50	25-35	NP-5
	3-23	Fine sandy loam, sandy loam, gravelly sandy loam	ML, SM	A-2, A-4	0	0	85-100	70-100	45-85	25-55	25-35	NP-5
	23-50	Loam, gravelly loam, gravelly sandy loam	ML, SM	A-1, A-2, A-4	0	0-5	65-95	50-85	35-80	20-65	20-30	NP-5
	50-63	Gravelly fine sandy loam, very gravelly sandy loam, very flaggy sandy loam	GM, SM	A-1, A-2	0-5	0-25	55-85	35-65	25-50	15-35	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
4:												
Almac-----------	0-3	Fine sandy loam	SM	A-4	0	0	95-100	80-100	55-80	35-50	25-35	NP-5
	3-23	Fine sandy loam, sandy loam, gravelly sandy loam	ML, SM	A-2, A-4	0	0	85-100	70-100	45-85	25-55	25-35	NP-5
	23-50	Loam, gravelly loam, gravelly sandy loam	ML, SM	A-1, A-2, A-4	0	0-5	65-95	50-85	35-80	20-65	20-30	NP-5
	50-63	Gravelly fine sandy loam, very gravelly sandy loam, very flaggy sandy loam	GM, SM	A-1, A-2	0-5	0-25	55-85	35-65	25-50	15-35	15-20	NP-5
5:												
Almac-----------	0-8	Fine sandy loam	SM	A-4	0	0	95-100	80-100	55-80	35-50	25-35	NP-5
	8-27	Fine sandy loam, sandy loam, gravelly sandy loam	ML, SM	A-4, A-2	0	0	85-100	70-100	45-85	25-55	25-35	NP-5
	27-60	Gravelly fine sandy loam, very gravelly sandy loam, very flaggy sandy loam	GM, SM	A-1, A-2	0-5	0-25	55-85	35-65	25-50	15-35	15-20	NP-5
Azwell----------	0-4	Stony loam	SM	A-4	5-15	0-5	70-90	60-80	50-65	35-50	20-35	NP-10
	4-15	Cobbly loam, stony fine sandy loam, very cobbly loam	SM	A-2, A-4	0-15	10-30	85-95	60-70	45-65	25-50	20-35	NP-10
	15-26	Very stony fine sandy loam, very cobbly fine sandy loam, very stony sandy loam	SM	A-1, A-2, A-4	10-45	15-40	80-95	65-75	40-65	20-40	15-25	NP-5
	26-30	Unweathered bedrock			---	---	---	---	---	---	---	---
6:												
Almac-----------	0-8	Fine sandy loam	SM	A-4	0	0	95-100	80-100	55-80	35-50	25-35	NP-5
	8-27	Fine sandy loam, sandy loam, gravelly sandy loam	ML, SM	A-4, A-2	0	0	85-100	70-100	45-85	25-55	25-35	NP-5
	27-60	Gravelly fine sandy loam, very gravelly sandy loam, very flaggy sandy loam	GM, SM	A-1, A-2	0-5	0-25	55-85	35-65	25-50	15-35	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
6:												
Azwell	0-4	Stony loam	SM	A-4	5-15	0-5	70-90	60-80	50-65	35-50	20-35	NP-10
	4-15	Cobbly loam, stony fine sandy loam, very cobbly loam	SM	A-2, A-4	0-15	10-30	85-95	60-70	45-65	25-50	20-35	NP-10
	15-26	Very stony fine sandy loam, very cobbly fine sandy loam, very stony sandy loam	SM	A-1, A-2, A-4	10-45	15-40	80-95	65-75	40-65	20-40	15-25	NP-5
	26-30	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop	0-60	Bedrock			---	---	---	---	---	---	---	---
7:												
Almac	0-8	Fine sandy loam	SM	A-4	0	0	95-100	80-100	55-80	35-50	25-35	NP-5
	8-27	Fine sandy loam, sandy loam, gravelly sandy loam	ML, SM	A-4, A-2	0	0	85-100	70-100	45-85	25-55	25-35	NP-5
	27-60	Gravelly fine sandy loam, very gravelly sandy loam, very flaggy sandy loam	GM, SM	A-1, A-2	0-5	0-25	55-85	35-65	25-50	15-35	15-20	NP-5
Rock outcrop	0-60	Bedrock			---	---	---	---	---	---	---	---
8:												
Alnult	0-6	Very stony fine sandy loam	SM	A-1, A-2	30-60	35-60	65-80	60-75	40-55	20-35	20-30	NP-5
	6-32	Very stony fine sandy loam, very stony sandy loam	SM	A-1, A-2	5-45	25-60	70-100	60-90	35-55	20-35	20-30	NP-5
	32-60	Extremely gravelly fine sandy loam, extremely gravelly loam, very gravelly fine sandy loam	GM, GP-GM	A-1	0	5-40	20-35	15-25	5-20	5-15	20-30	NP-5
Reggad	0-9	Extremely stony muck	GP-GM	A-1	30-60	30-70	30-50	10-20	5-15	0-10	0-10	NP
	9-60	Fragmental material	GP	A-1	30-70	30-65	30-50	10-20	0-10	0-5	0-0	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
9:												
Altapeak--------	0-13	Gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	13-29	Very cobbly loamy sand, very stony loamy sand, very cobbly sandy loam	GM, SM	A-1	0-30	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	29-54	Extremely stony loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	GP, GP-GM, SP, SP-SM	A-1	5-40	0-40	35-65	25-55	15-25	0-10	0-10	NP
	54-64	Weathered bedrock			---	---	---	---	---	---	---	---
10:												
Altapeak--------	0-13	Gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	13-29	Very cobbly loamy sand, very stony loamy sand, very cobbly sandy loam	GM, SM	A-1	0-30	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	29-54	Extremely stony loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	GP, GP-GM, SP, SP-SM	A-1	5-40	0-40	35-65	25-55	15-25	0-10	0-10	NP
	54-64	Weathered bedrock			---	---	---	---	---	---	---	---
11:												
Altapeak--------	0-13	Gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	13-29	Very cobbly loamy sand, very stony loamy sand, very cobbly sandy loam	GM, SM	A-1	0-30	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	29-54	Extremely stony loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	GP, GP-GM, SP, SP-SM	A-1	5-40	0-40	35-65	25-55	15-25	0-10	0-10	NP
	54-64	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
12:												
Altapeak--------	0-6	Gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	6-26	Very gravelly sandy loam, very gravelly loamy sand, very cobbly sandy loam	GM, SM	A-1	0-5	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	26-48	Very cobbly loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	GP, GP-GM, SP, SP-SM	A-1	0-10	0-55	35-65	25-55	15-25	0-10	0-10	NP
	48-58	Weathered bedrock			---	---	---	---	---	---	---	---
13:												
Altapeak--------	0-13	Gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	13-29	Very cobbly loamy sand, very stony loamy sand, very cobbly sandy loam	GM, SM	A-1	0-30	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	29-54	Extremely stony loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	GP, GP-GM, SP, SP-SM	A-1	5-40	0-40	35-65	25-55	15-25	0-10	0-10	NP
	54-64	Weathered bedrock			---	---	---	---	---	---	---	---
Alnult----------	0-6	Very stony fine sandy loam	SM	A-1, A-2	30-60	35-60	65-80	60-75	40-55	20-35	20-30	NP-5
	6-32	Very stony fine sandy loam, very stony sandy loam	SM	A-1, A-2	5-45	25-60	70-100	60-90	35-55	20-35	20-30	NP-5
	32-60	Extremely gravelly fine sandy loam, extremely gravelly loam, very gravelly fine sandy loam	GM, GP-GM	A-1	0	5-40	20-35	15-25	5-20	5-15	20-30	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
14:												
Altapeak--------	0-6	Gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	6-26	Very gravelly sandy loam, very gravelly loamy sand, very cobbly sandy loam	GM, SM	A-1	0-5	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	26-48	Very cobbly loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	SP-SM, GP, GP-GM, SP	A-1	0-10	0-55	35-65	25-55	15-25	0-10	0-10	NP
	48-58	Weathered bedrock			---	---	---	---	---	---	---	---
Alnult----------	0-6	Very stony fine sandy loam	SM	A-1, A-2	30-60	35-60	65-80	60-75	40-55	20-35	20-30	NP-5
	6-32	Very stony fine sandy loam, very stony sandy loam	SM	A-1, A-2	5-45	25-60	70-100	60-90	35-55	20-35	20-30	NP-5
	32-60	Extremely gravelly fine sandy loam, extremely gravelly loam, very gravelly fine sandy loam	GM, GP-GM	A-1	0	5-40	20-35	15-25	5-20	5-15	20-30	NP-5
15:												
Altapeak--------	0-6	Gravelly sandy loam	SM, GM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	6-26	Very gravelly sandy loam, very gravelly loamy sand, very cobbly sandy loam	GM, SM	A-1	0-5	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	26-48	Very cobbly loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	GP, GP-GM, SP, SP-SM	A-1	0-10	0-55	35-65	25-55	15-25	0-10	0-10	NP
	48-58	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
15:												
Alnult	0-6	Very stony fine sandy loam	SM	A-1, A-2	30-60	35-60	65-80	60-75	40-55	20-35	20-30	NP-5
	6-32	Very stony fine sandy loam, very stony sandy loam	SM	A-1, A-2	5-45	25-60	70-100	60-90	35-55	20-35	20-30	NP-5
	32-60	Extremely gravelly fine sandy loam, extremely gravelly loam, very gravelly fine sandy loam	GM, GP-GM	A-1	0	5-40	20-35	15-25	5-20	5-15	20-30	NP-5
16:												
Anatone	0-4	Cobbly loam	ML	A-4	0-5	10-35	70-100	60-90	65-80	50-60	25-35	NP-10
	4-11	Very gravelly loam, very cobbly loam, extremely cobbly loam	GM, ML	A-1, A-2, A-4	0-2	10-70	40-70	35-55	25-55	20-55	25-35	NP-10
	11-15	Unweathered bedrock			---	---	---	---	---	---	---	---
Blewett	0-3	Very gravelly sandy loam	GM	A-1	0-5	10-25	35-55	35-50	15-30	10-20	0-10	NP
	3-10	Extremely gravelly sandy loam, very gravelly sandy loam, very gravelly loam	GM	A-1	0-5	15-25	30-50	20-40	15-30	10-25	0-10	NP
	10-14	Unweathered bedrock			---	---	---	---	---	---	---	---
17:												
Anatone	0-4	Cobbly loam	ML	A-4	0-5	10-35	70-100	60-90	65-80	50-60	25-35	NP-10
	4-11	Very gravelly loam, very cobbly loam, extremely cobbly loam	GM, ML	A-1, A-2, A-4	0-2	10-70	40-70	35-55	25-55	20-55	25-35	NP-10
	11-15	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
18: Andic Cryochrepts----	0-4	Extremely stony loam	ML, SM	A-1, A-2, A-4	25-40	10-40	60-100	30-90	20-85	10-70	20-30	NP-5
	4-10	Very cobbly loam, very gravelly fine sandy loam, gravelly fine sandy loam	ML, SM	A-1, A-2, A-4	0-10	5-35	70-100	60-90	40-85	25-70	20-30	NP-5
	10-60	Very cobbly loam, gravelly loam, gravelly fine sandy loam	ML, SM	A-1, A-2, A-4	0-10	5-45	70-90	60-90	40-85	25-70	20-30	NP-5
19: Andic Cryumbrepts----	0-8	Stony sandy loam	SM	A-1, A-2	5-10	0-10	75-85	65-75	40-50	20-30	30-40	NP-5
	8-24	Gravelly sandy loam, very gravelly sandy loam, gravelly fine sandy loam	GM, SM	A-1, A-2	0-5	10-15	55-85	50-65	35-45	20-30	30-40	NP-5
	24-60	Extremely gravelly sandy loam, very gravelly sandy loam, very cobbly fine sandy loam	GM, SM	A-1	0-10	20-30	40-80	20-65	15-40	10-25	30-40	NP-5
20: Andic Cryumbrepts----	0-9	Stony sandy loam	SM	A-2, A-4	5-10	5-10	95-100	90-100	55-85	30-50	30-40	NP-5
	9-14	Gravelly fine sandy loam, very gravelly fine sandy loam, very stony fine sandy loam	GM, SM	A-1, A-2	5-25	10-35	60-85	45-65	30-50	15-30	30-40	NP-5
	14-24	Very gravelly fine sandy loam, extremely gravelly fine sandy loam, cobbly fine sandy loam	GM, SM	A-1, A-2	0-10	25-30	40-80	25-70	15-50	10-30	30-40	NP-5
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
21:												
Andic Cryumbrepts----	0-9	Stony sandy loam	SM	A-2, A-4	5-10	5-10	95-100	90-100	55-85	30-50	30-40	NP-5
	9-14	Gravelly fine sandy loam, very gravelly fine sandy loam, very stony fine sandy loam	GM, SM	A-1, A-2	5-25	10-35	60-85	45-65	30-50	15-30	30-40	NP-5
	14-24	Very gravelly fine sandy loam, extremely gravelly fine sandy loam, cobbly fine sandy loam	GM, SM	A-1, A-2	0-10	25-30	40-80	25-70	15-50	10-30	30-40	NP-5
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Haplocryods-----	0-3	Stony sandy loam	SM	A-2, A-4	5-15	5-10	95-100	90-100	45-75	30-40	20-30	NP-5
	3-32	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-5	5-10	95-100	80-100	55-70	30-40	20-30	NP-5
	32-60	Extremely cobbly loam, very cobbly sandy loam, very stony loam	ML, SM	A-1, A-2, A-4	15-25	30-50	70-85	55-75	35-75	20-55	20-30	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
22:												
Andic Cryumbrepts----	0-9	Stony sandy loam	SM	A-2, A-4	5-10	5-10	95-100	90-100	55-85	30-50	30-40	NP-5
	9-14	Gravelly fine sandy loam, very gravelly fine sandy loam, very stony fine sandy loam	GM, SM	A-1, A-2	5-25	10-35	60-85	45-65	30-50	15-30	30-40	NP-5
	14-24	Very gravelly fine sandy loam, extremely gravelly fine sandy loam, cobbly fine sandy loam	GM, SM	A-1, A-2	0-10	25-30	40-80	25-70	15-50	10-30	30-40	NP-5
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
23:												
Andic Cryumbrepts----	0-10	Sandy loam	SM	A-2, A-4	0	0-5	90-100	80-100	50-70	25-40	25-40	NP-5
	10-16	Gravelly sandy loam, gravelly loam	SM	A-1, A-2, A-4	0	0-5	70-90	55-80	40-70	20-50	20-30	NP-5
	16-33	Very gravelly sandy loam, gravelly sandy loam, very gravelly loamy sand	SM, SP-SM	A-1, A-2	0	5-10	60-75	45-65	25-50	5-25	15-25	---
	33-51	Very gravelly sandy loam, very gravelly loamy sand	SM, SP-SM	A-1, A-2	0	5-15	50-70	35-60	20-45	5-25	15-25	---
	51-55	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
24:												
Andic Haplumbrepts---	0-8	Stony fine sandy loam	SM	A-2	15-30	10-15	65-90	60-80	40-65	25-45	30-40	NP-10
	8-29	Very gravelly fine sandy loam, very cobbly fine sandy loam, gravelly fine sandy loam	GM, SM	A-1, A-2, A-4	0-5	15-25	60-100	50-90	35-75	20-50	30-40	NP-10
	29-33	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
25:												
Angle-----------	0-2	Stony loamy sand	SM	A-1, A-2	1-3	0-5	95-100	90-100	40-50	20-30	0-10	NP
	2-7	Loamy sand, sandy loam, cobbly loamy sand	SM	A-1, A-2	0	0-10	70-100	60-100	40-75	20-40	0-10	NP
	7-42	Gravelly loamy sand, cobbly loamy sand, loamy sand	SM	A-1, A-2	0-15	0-40	80-100	70-100	40-70	20-30	0-10	NP
	42-60	Sand	SM, SP-SM	A-1, A-2, A-3	0	0-10	85-100	85-100	40-60	5-15	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
26:												
Aquic Cryumbrepts----	0-4	Loamy fine sand	SM	A-1, A-2	0	0-5	95-100	95-100	30-65	15-30	15-20	NP-5
	4-8	Very fine sandy loam, loamy fine sand, silt loam	ML, SM	A-2, A-4	0	0-5	95-100	95-100	50-95	15-85	15-25	NP-5
	8-29	Sand, loamy fine sand, silt loam	ML, SM	A-1, A-2, A-4	0	0-5	95-100	80-100	40-90	10-70	15-25	NP-5
	29-60	Stratified sand to extremely gravelly loamy fine sand	SM, SP-SM, SW	A-1, A-2	0	0-10	40-100	15-80	10-60	0-30	15-20	NP-5
27:												
Ardening--------	0-6	Stony loam	SC-SM	A-4	5-15	0-10	85-95	75-90	50-65	35-50	20-30	5-10
	6-18	Gravelly loam, cobbly loam	SC-SM	A-4	0-5	0-15	70-85	65-85	45-65	35-50	20-30	5-10
	18-26	Cobbly loam, gravelly fine sandy loam, cobbly sandy loam	SC-SM, SM	A-2, A-4	0-5	0-20	75-90	65-80	35-65	20-50	25-35	5-10
	26-42	Cobbly sandy loam, cobbly loam, gravelly fine sandy loam	SC-SM, SM	A-2, A-4	0-5	10-20	70-85	65-75	35-65	20-50	25-35	5-10
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
28:												
Ardenmont-------	0-4	Coarse sandy loam	CL-ML	A-4	0	0	95-100	85-100	75-95	55-75	20-30	5-10
	4-23	Coarse sandy loam, gravelly sandy loam, gravelly coarse sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	60-100	55-90	45-85	35-75	25-35	5-10
	23-51	Gravelly loamy coarse sand, loamy coarse sand	GC-GM, GM, SC-SM, SM	A-2, A-4	0	0-5	60-95	55-90	35-80	20-50	25-35	5-10
	51-61	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
29:												
Ardenmont	0-4	Coarse sandy loam	CL-ML	A-4	0	0	95-100	85-100	75-95	55-75	20-30	5-10
	4-23	Coarse sandy loam, gravelly sandy loam, gravelly coarse sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	60-100	55-90	45-85	35-75	25-35	5-10
	23-51	Gravelly loamy coarse sand, loamy coarse sand	GC-GM, GM, SC-SM, SM	A-2, A-4	0	0-5	60-95	55-90	35-80	20-50	25-35	5-10
	51-61	Weathered bedrock			---	---	---	---	---	---	---	---
30:												
Ardenmont	0-4	Coarse sandy loam	CL-ML	A-4	0	0	95-100	85-100	75-95	55-75	20-30	5-10
	4-23	Coarse sandy loam, gravelly sandy loam, gravelly coarse sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	60-100	55-90	45-85	35-75	25-35	5-10
	23-51	Gravelly loamy coarse sand, loamy coarse sand	GC-GM, GM, SC-SM, SM	A-2, A-4	0	0-5	60-95	55-90	35-80	20-50	25-35	5-10
	51-61	Weathered bedrock			---	---	---	---	---	---	---	---
31:												
Ardenmont	0-4	Coarse sandy loam	CL-ML	A-4	0	0	95-100	85-100	75-95	55-75	20-30	5-10
	4-23	Coarse sandy loam, gravelly sandy loam, gravelly coarse sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	60-100	55-90	45-85	35-75	25-35	5-10
	23-51	Gravelly loamy coarse sand, loamy coarse sand	GC-GM, GM, SC-SM, SM	A-2, A-4	0	0-5	60-95	55-90	35-80	20-50	25-35	5-10
	51-61	Weathered bedrock			---	---	---	---	---	---	---	---
Swakane	0-2	Stony sandy loam	SM	A-1, A-2	5-15	10-20	60-80	50-70	30-50	15-30	20-30	NP-5
	2-15	Very gravelly loam, very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1, A-2	0-10	10-30	35-60	25-50	15-45	10-35	20-30	NP-5
	15-19	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
32:												
Ardenvoir-------	0-6	Stony fine sandy loam	SM	A-1, A-2	5-10	10-15	70-80	50-60	35-50	20-30	15-20	NP-5
	6-12	Very cobbly sandy loam, very gravelly fine sandy loam	GM, SM	A-1	0-10	15-25	50-65	35-50	20-40	15-25	15-20	NP-5
	12-56	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1	0-10	15-30	40-60	15-30	10-30	5-15	15-20	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
33:												
Ardenvoir-------	0-6	Stony fine sandy loam	SM	A-1, A-2	5-10	10-15	70-80	50-60	35-50	20-30	15-20	NP-5
	6-12	Very cobbly sandy loam, very gravelly fine sandy loam	GM, SM	A-1	0-10	15-25	50-65	35-50	20-40	15-25	15-20	NP-5
	12-56	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1	0-10	15-30	40-60	15-30	10-30	5-15	15-20	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
34:												
Azwell----------	0-4	Stony loam	SM	A-4	5-15	0-5	70-90	60-80	50-65	35-50	20-35	NP-10
	4-15	Cobbly loam, stony fine sandy loam, very cobbly loam	SM	A-2, A-4	0-15	10-30	85-95	60-70	45-65	25-50	20-35	NP-10
	15-26	Very stony fine sandy loam, very cobbly fine sandy loam, very stony sandy loam	SM	A-1, A-2, A-4	10-45	15-40	80-95	65-75	40-65	20-40	15-25	NP-5
	26-30	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
35:												
Bagmont---------	0-4	Gravelly loam	SM	A-4	0	5-10	70-90	55-75	35-65	35-50	20-30	NP-5
	4-12	Very gravelly fine sandy loam	GM	A-1, A-2	0	5-15	40-50	30-45	20-40	5-30	20-30	NP-5
	12-38	Very cobbly fine sandy loam, very gravelly fine sandy loam, extremely gravelly sandy loam	GM	A-1	0-10	15-40	40-60	25-50	20-50	10-25	15-20	NP-5
	38-48	Weathered bedrock			---	---	---	---	---	---	---	---
36:												
Bigcreek--------	0-5	Cindery sandy loam	SM	A-1, A-2	0	0-5	70-90	60-75	45-55	20-30	30-40	NP-5
	5-16	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	70-90	60-75	40-60	20-35	30-40	NP-5
	16-30	Cinders	SP	A-1	0	0-5	95-100	0-5	0-5	0-5	0-10	NP
	30-33	Coarse sand, sand	SP	A-1	0-5	0-5	100	85-95	30-40	0-5	0-10	NP
	33-38	Gravelly sandy loam, gravelly fine sandy loam	SM	A-1, A-2	0	10-15	75-85	55-65	35-50	15-30	30-40	NP-5
	38-60	Extremely gravelly sand, extremely cobbly sand	GW	A-1	0-10	20-55	30-50	15-30	10-20	0-5	15-25	NP-5
37:												
Billyridge------	0-16	Gravelly sandy loam	SM	A-1, A-2	0	10-15	75-85	65-75	40-55	20-30	15-25	NP-5
	16-40	Gravelly sandy loam, sandy loam, fine sandy loam	SM	A-1, A-2	0	5-10	75-95	65-95	40-55	20-30	15-25	NP-5
	40-60	Gravelly sandy loam, sandy loam, cobbly sandy loam	SM	A-1, A-2	0-10	10-20	70-100	65-95	45-60	20-30	15-25	NP-5
38:												
Billyridge------	0-16	Gravelly sandy loam	SM	A-1, A-2	0	10-15	75-85	65-75	40-55	20-30	15-25	NP-5
	16-40	Gravelly sandy loam, sandy loam, fine sandy loam	SM	A-1, A-2	0	5-10	75-95	65-95	40-55	20-30	15-25	NP-5
	40-60	Gravelly sandy loam, sandy loam, cobbly sandy loam	SM	A-1, A-2	0-10	10-20	70-100	65-95	45-60	20-30	15-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
39:												
Billyridge------	0-16	Gravelly sandy loam	SM	A-1, A-2	0	10-15	75-85	65-75	40-55	20-30	15-25	NP-5
	16-40	Gravelly sandy loam, sandy loam, fine sandy loam	SM	A-1, A-2	0	5-10	75-95	65-95	40-55	20-30	15-25	NP-5
	40-60	Gravelly sandy loam, sandy loam, cobbly sandy loam	SM	A-1, A-2	0-10	10-20	70-100	65-95	45-60	20-30	15-25	NP-5
40:												
Bisping---------	0-4	Fine sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	60-75	30-50	30-40	NP-5
	4-30	Cindery fine sandy loam, cindery sandy loam	SM	A-1, A-2	0	0-5	90-100	55-75	40-60	20-35	30-40	NP-5
	30-60	Loam, gravelly loam	ML, SM	A-4	0	0-10	70-100	60-95	50-80	40-70	20-25	NP-5
41:												
Bisping---------	0-4	Fine sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	60-75	30-50	30-40	NP-5
	4-30	Cindery fine sandy loam, cindery sandy loam	SM	A-1, A-2	0	0-5	90-100	55-75	40-60	20-35	30-40	NP-5
	30-60	Loam, gravelly loam	ML, SM	A-4	0	0-10	70-100	60-95	50-80	40-70	20-25	NP-5
42:												
Bisping---------	0-4	Fine sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	60-75	30-50	30-40	NP-5
	4-30	Cindery fine sandy loam, cindery sandy loam	SM	A-1, A-2	0	0-5	90-100	55-75	40-60	20-35	30-40	NP-5
	30-60	Loam, gravelly loam	ML, SM	A-4	0	0-10	70-100	60-95	50-80	40-70	20-25	NP-5
43:												
Bjork-----------	0-10	Loam	CL-ML	A-4	0	0-5	85-100	75-100	70-100	70-85	20-30	5-10
	10-24	Clay loam, silt loam, sandy clay loam	CL, SC	A-6, A-7	0	0-5	85-100	75-100	60-95	35-80	30-45	15-25
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
44:												
Bjork-----------	0-6	Stony loam	CL-ML	A-4	5-10	0-5	85-100	75-100	70-90	50-80	20-30	5-10
	6-30	Silt loam, sandy clay loam, clay loam	CL, SC	A-6, A-7	0	0-5	85-100	75-100	60-95	35-80	30-45	15-25
	30-40	Weathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
45:												
Blag------------	0-6	Gravelly sandy loam	SM	A-2	0	0-5	80-85	60-75	35-50	25-35	0-10	NP
	6-16	Gravelly sandy loam, sandy loam	SM	A-2, A-4	0	0-5	80-100	70-90	35-50	25-40	0-10	NP
	16-20	Unweathered bedrock			---	---	---	---	---	---	---	---
Cle Elum--------	0-14	Loam	CL-ML, ML	A-4	0	0	100	95-100	80-95	55-70	20-30	NP-10
	14-26	Clay loam, sandy clay loam	CL	A-6	0	0	100	80-100	70-100	50-80	30-40	15-20
	26-32	Weathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
46:												
Blag------------	0-6	Gravelly sandy loam	SM	A-2	0	0-5	80-85	60-75	35-50	25-35	0-10	NP
	6-16	Gravelly sandy loam, sandy loam	SM	A-2, A-4	0	0-5	80-100	70-90	35-50	25-40	0-10	NP
	16-20	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
47:												
Blewett---------	0-3	Very gravelly sandy loam	GM	A-1	0-5	10-25	35-55	35-50	15-30	10-20	0-10	NP
	3-10	Extremely gravelly sandy loam, very gravelly sandy loam, very gravelly loam	GM	A-1	0-5	15-25	30-50	20-40	15-30	10-25	0-10	NP
	10-14	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
48:												
Borland---------	0-6	Loam	CL-ML	A-4	0	0-5	95-100	90-100	75-90	55-70	20-30	5-10
	6-11	Clay loam, loam, sandy clay loam	CL	A-6	0	0-5	95-100	90-100	80-90	50-70	30-40	10-15
	11-15	Unweathered bedrock			---	---	---	---	---	---	---	---
49:												
Borland---------	0-6	Loam	CL-ML	A-4	0	0-5	95-100	90-100	75-90	55-70	20-30	5-10
	6-11	Clay loam, loam, sandy clay loam	CL	A-6	0	0-5	95-100	90-100	80-90	50-70	30-40	10-15
	11-15	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
50:												
Brief-----------	0-16	Gravelly sandy loam	SM	A-1, A-2	0	0-10	70-90	50-75	30-50	20-30	20-30	NP-5
	16-26	Gravelly sandy loam	SM	A-2	0-10	0-10	75-85	55-75	55-65	25-30	20-30	NP-5
	26-60	Very gravelly sandy loam, very gravelly coarse sandy loam, gravelly sandy loam	GM, SM	A-1	0-10	5-15	50-75	30-55	20-30	10-20	20-30	NP-5
51:												
Brisky----------	0-4	Very gravelly sandy loam	GM, SM	A-1	0-10	5-20	50-65	40-60	30-45	15-25	15-25	NP-5
	4-10	Very gravelly loam, very cobbly loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	5-45	50-70	40-55	25-45	15-35	20-25	NP-5
	10-14	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
52:												
Burch-----------	0-10	Loam	ML	A-4	0	0	100	90-100	75-85	60-75	20-30	NP-5
	10-60	Loam, very fine sandy loam, silt loam	ML, SM	A-4	0	0	95-100	90-100	80-90	40-75	25-35	NP-10
53:												
Burnscreek------	0-3	Stony sandy loam	SM	A-2, A-4	5-15	5-10	85-95	80-90	45-60	25-40	20-25	NP-5
	3-13	Gravelly sandy loam, cobbly fine sandy loam, very stony sandy loam	SM	A-2	0-15	0-25	80-90	65-75	40-60	25-35	20-25	NP-5
	13-60	Extremely cobbly sandy loam, very cobbly coarse sandy loam, very gravelly fine sandy loam	GM, SM	A-1	0-25	30-50	40-70	30-65	25-45	10-25	20-25	NP-5
54:												
Burrant---------	0-16	Loam	CL-ML	A-4	0	0	95-100	90-100	75-95	55-75	20-30	5-10
	16-42	Loam, silt loam	CL-ML	A-4	0	0	95-100	90-100	75-95	55-75	20-30	5-10
	42-60	Loam, silt loam	CL-ML	A-4	0	0	95-100	90-100	75-100	55-85	20-30	5-10
55:												
Burrant---------	0-16	Loam	CL-ML	A-4	0	0	95-100	90-100	75-95	55-75	20-30	5-10
	16-42	Loam, silt loam	CL-ML	A-4	0	0	95-100	90-100	75-95	55-75	20-30	5-10
	42-60	Loam, silt loam	CL-ML	A-4	0	0	95-100	90-100	75-100	55-85	20-30	5-10

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
56:												
Cashmont--------	0-12	Sandy loam	SM	A-2, A-4	0	0-5	85-100	75-90	60-75	30-45	15-25	NP-5
	12-30	Gravelly sandy loam, gravelly fine sandy loam, gravelly coarse sandy loam	SM	A-1, A-2	0	0-10	60-80	55-75	35-55	20-35	15-25	NP-5
	30-40	Gravelly sandy loam, gravelly fine sandy loam, gravelly coarse sandy loam	SM	A-1, A-2	0-10	0-15	60-80	55-75	35-55	20-35	15-25	NP-5
	40-60	Very gravelly loamy sand, very gravelly sandy loam, gravelly sand	GM, GP-GM, SM, SP-SM	A-1	0-10	0-15	45-75	35-70	20-50	5-25	0-10	NP
57:												
Cashmont--------	0-10	Gravelly sandy loam	SM	A-1, A-2	0	0-10	60-85	55-75	30-45	20-35	15-25	NP-5
	10-28	Gravelly sandy loam, gravelly fine sandy loam, gravelly coarse sandy loam	SM	A-1, A-2	0	0-10	60-80	55-75	35-55	20-35	15-25	NP-5
	28-60	Gravelly sandy loam, gravelly fine sandy loam, gravelly coarse sandy loam	SM	A-1, A-2	0-10	0-15	60-80	55-75	35-55	20-35	15-25	NP-5
58:												
Chapot----------	0-8	Extremely bouldery loam	CL-ML, SC-SM	A-4	40-55	10-15	65-90	60-85	50-80	35-65	20-30	5-10
	8-16	Very stony loam, very cobbly loam	CL, GC-GM, ML, SC-SM	A-4	30-50	10-15	60-85	55-80	50-75	35-60	25-35	5-10
	16-60	Very bouldery clay loam, very stony clay loam, very cobbly clay loam	CL, GC, ML, SC	A-6	30-50	10-15	60-85	55-80	50-80	40-65	35-40	10-15

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
59:												
Chinkmin--------	0-4	Bouldery fine sandy loam	SM	A-4	5-15	0-5	90-95	85-95	60-80	35-50	30-40	NP-10
	4-7	Gravelly fine sandy loam, gravelly sandy loam, fine sandy loam	SM	A-2, A-4	0	0-10	90-95	85-95	50-80	30-50	30-40	NP-10
	7-18	Gravelly sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	SM	A-2, A-4	0	0-30	70-95	60-85	35-70	20-45	30-40	NP-5
	18-36	Very gravelly sandy loam, very cobbly sandy loam, very gravelly loamy coarse sand	GM, SM	A-1, A-2	0	15-30	50-70	35-55	20-40	5-25	25-30	NP-5
	36-40	Cemented glacial till			---	---	---	---	---	---	---	---
60:												
Chinkmin--------	0-4	Bouldery fine sandy loam	SM	A-4	5-15	0-5	90-95	85-95	60-80	35-50	30-40	NP-10
	4-7	Gravelly fine sandy loam, gravelly sandy loam, fine sandy loam	SM	A-2, A-4	0	0-10	90-95	85-95	50-80	30-50	30-40	NP-10
	7-18	Gravelly sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	SM	A-2, A-4	0	0-30	70-95	60-85	35-70	20-45	30-40	NP-5
	18-36	Very gravelly sandy loam, very cobbly sandy loam, very gravelly loamy coarse sand	GM, SM	A-1, A-2	0	15-30	50-70	35-55	20-40	5-25	25-30	NP-5
	36-40	Cemented glacial till			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
61:												
Chinkmin--------	0-4	Bouldery fine sandy loam	SM	A-4	5-15	0-5	90-95	85-95	60-80	35-50	30-40	NP-10
	4-7	Gravelly fine sandy loam, gravelly sandy loam, fine sandy loam	SM	A-2, A-4	0	0-10	90-95	85-95	50-80	30-50	30-40	NP-10
	7-18	Gravelly sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	SM	A-2, A-4	0	0-30	70-95	60-85	35-70	20-45	30-40	NP-5
	18-36	Very gravelly sandy loam, very cobbly sandy loam, very gravelly loamy coarse sand	GM, SM	A-1, A-2	0	15-30	50-70	35-55	20-40	5-25	25-30	NP-5
	36-40	Cemented glacial till			---	---	---	---	---	---	---	---
Altapeak--------	0-6	Gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	6-26	Very gravelly sandy loam, very gravelly loamy sand, very cobbly sandy loam	GM, SM	A-1	0-5	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	26-48	Very cobbly loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	GP, GP-GM, SP, SP-SM	A-1	0-10	0-55	35-65	25-55	15-25	0-10	0-10	NP
	48-58	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
62:												
Chinkmin--------	0-4	Bouldery fine sandy loam	SM	A-4	5-15	0-5	90-95	85-95	60-80	35-50	30-40	NP-10
	4-7	Gravelly fine sandy loam, gravelly sandy loam, fine sandy loam	SM	A-2, A-4	0	0-10	90-95	85-95	50-80	30-50	30-40	NP-10
	7-18	Gravelly sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	SM	A-2, A-4	0	0-30	70-95	60-85	35-70	20-45	30-40	NP-5
	18-36	Very gravelly sandy loam, very cobbly sandy loam, very gravelly loamy coarse sand	GM, SM	A-1, A-2	0	15-30	50-70	35-55	20-40	5-25	25-30	NP-5
	36-40	Cemented glacial till			---	---	---	---	---	---	---	---
Altapeak--------	0-6	Gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	6-26	Very gravelly sandy loam, very gravelly loamy sand, very cobbly sandy loam	GM, SM	A-1	0-5	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	26-48	Very cobbly loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	GP, GP-GM, SP, SP-SM	A-1	0-10	0-55	35-65	25-55	15-25	0-10	0-10	NP
	48-58	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
63:												
Chiwaukum-------	0-2	Stony sandy loam	SM	A-2, A-4	5-15	0-10	95-100	90-95	50-60	30-40	30-40	NP-5
	2-11	Sandy loam, cobbly sandy loam, stony fine sandy loam	SM	A-1, A-2	0-10	5-15	70-90	65-85	45-70	20-35	30-40	NP-5
	11-39	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-5	5-20	75-95	70-90	40-65	20-30	30-40	NP-5
	39-60	Very cobbly sandy loam, extremely stony coarse sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	10-30	25-55	45-65	40-60	25-45	15-30	15-25	NP-5
64:												
Chiwaukum-------	0-5	Bouldery fine sandy loam	SM	A-4	5-20	0-10	95-100	90-95	65-75	35-45	30-40	NP-5
	5-17	Gravelly fine sandy loam, gravelly sandy loam, stony fine sandy loam	SM	A-1, A-2	0-10	5-10	70-90	65-85	45-70	20-35	30-40	NP-5
	17-26	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-5	5-20	75-95	70-90	40-65	20-30	30-40	NP-5
	26-60	Very cobbly sandy loam, extremely stony coarse sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	10-30	25-55	45-65	40-60	25-45	15-30	15-25	NP-5
65:												
Chiwaukum-------	0-10	Bouldery fine sandy loam	SM	A-4	5-20	0-10	95-100	90-95	65-75	35-45	30-40	NP-5
	10-38	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-5	5-20	75-95	70-90	40-65	20-30	30-40	NP-5
	38-60	Very cobbly sandy loam, extremely stony coarse sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	10-30	25-55	45-65	40-60	25-45	15-30	15-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
66:												
Chiwaukum-------	0-2	Very bouldery fine sandy loam	SM	A-4	15-25	0-15	95-100	90-95	65-75	35-45	30-40	NP-5
	2-15	Gravelly fine sandy loam, cobbly sandy loam, stony fine sandy loam	SM	A-2, A-1	5-10	5-15	70-90	65-85	45-70	20-35	30-40	NP-5
	15-24	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-5	5-20	75-95	70-90	40-65	20-30	30-40	NP-5
	24-60	Very cobbly sandy loam, extremely stony coarse sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	10-30	25-55	45-65	40-60	25-45	15-30	15-25	NP-5
67:												
Chiwaukum-------	0-2	Stony sandy loam	SM	A-2, A-4	5-15	0-10	95-100	90-95	50-60	30-40	30-40	NP-5
	2-11	Sandy loam, cobbly sandy loam, stony fine sandy loam	SM	A-1, A-2	0-10	5-15	70-90	65-85	45-70	20-35	30-40	NP-5
	11-39	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-5	5-20	75-95	70-90	40-65	20-30	30-40	NP-5
	39-60	Very cobbly sandy loam, extremely stony coarse sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	10-30	25-55	45-65	40-60	25-45	15-30	15-25	NP-5
Chiwaukum, south	0-10	Bouldery fine sandy loam	SM	A-4	5-20	0-10	95-100	90-95	65-75	35-45	30-40	NP-5
	10-38	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-5	5-20	75-95	70-90	40-65	20-30	30-40	NP-5
	38-60	Very cobbly sandy loam, extremely stony coarse sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	10-30	25-55	45-65	40-60	25-45	15-30	15-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
68:												
Chiwaukum-------	0-2	Stony sandy loam	SM	A-2, A-4	5-15	0-10	95-100	90-95	50-60	30-40	30-40	NP-5
	2-11	Sandy loam, cobbly sandy loam, stony fine sandy loam	SM	A-1, A-2	0-10	5-15	70-90	65-85	45-70	20-35	30-40	NP-5
	11-39	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-5	5-20	75-95	70-90	40-65	20-30	30-40	NP-5
	39-60	Very cobbly sandy loam, extremely stony coarse sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	10-30	25-55	45-65	40-60	25-45	15-30	15-25	NP-5
Chiwaukum, south	0-10	Bouldery fine sandy loam	SM	A-4	5-20	0-10	95-100	90-95	65-75	35-45	30-40	NP-5
	10-38	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-5	5-20	75-95	70-90	40-65	20-30	30-40	NP-5
	38-60	Very cobbly sandy loam, extremely stony coarse sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	10-30	25-55	45-65	40-60	25-45	15-30	15-25	NP-5
69:												
Chiwawa---------	0-2	Cindery fine sandy loam	SM	A-2, A-4	0	0	90-100	50-75	40-65	30-40	30-40	NP-5
	2-42	Cindery fine sandy loam, cindery sandy loam	SM	A-2, A-4	0	0-5	90-100	50-75	40-60	30-40	25-35	NP-5
	42-60	Very gravelly sand, extremely gravelly coarse sand, extremely cobbly sand	GP	A-1	0-10	15-30	35-45	30-35	15-25	0-5	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
70:												
Choralmont, till substratum-----	0-9	Cindery sandy loam	SM	A-1, A-2	0	0	100	50-75	30-50	15-30	25-30	NP-5
	9-17	Very cindery sandy loam	SM	A-1	0	0	100	25-50	20-40	10-25	25-30	NP-5
	17-33	Very cindery loamy sand, extremely cindery loamy sand	SP, SP-SM	A-1	0	0	100	10-25	5-20	2-10	20-30	NP-5
	33-48	Cinders	SP	A-1	0	0	100	5-10	5-10	0-5	0-10	NP
	48-54	Loamy sand, sand, coarse sand	SM	A-1, A-2	0	0	100	85-100	45-100	10-30	0-10	NP
	54-60	Fine sandy loam, gravelly fine sandy loam, very cobbly sandy loam	SM	A-1, A-2, A-4	0-5	5-25	65-95	50-85	30-70	15-50	20-30	NP-5
Choralmont------	0-11	Cindery sandy loam	SM	A-1, A-2	0	0	100	50-75	30-50	15-30	25-30	NP-5
	11-17	Very cindery sandy loam	SM	A-1	0	0	100	25-50	20-40	10-25	25-30	NP-5
	17-60	Cinders	SP	A-1	0	0	100	5-10	5-10	0-5	0-10	NP
71:												
Choralmont------	0-11	Cindery sandy loam	SM	A-1, A-2	0	0	100	50-75	30-50	15-30	25-30	NP-5
	11-17	Very cindery sandy loam	SM	A-1	0	0	100	25-50	20-40	10-25	25-30	NP-5
	17-60	Cinders	SP	A-1	0	0	100	5-10	5-10	0-5	0-10	NP
72:												
Choralmont------	0-11	Cindery sandy loam	SM	A-1, A-2	0	0	100	50-75	30-50	15-30	25-30	NP-5
	11-17	Very cindery sandy loam	SM	A-1	0	0	100	25-50	20-40	10-25	25-30	NP-5
	17-60	Cinders	SP	A-1	0	0	100	5-10	5-10	0-5	0-10	NP
73:												
Choralmont------	0-9	Cindery sandy loam	SM	A-1, A-2	0	0	100	50-75	30-50	15-30	25-30	NP-5
	9-17	Very cindery sandy loam	SM	A-1	0	0	100	25-50	20-40	10-25	25-30	NP-5
	17-33	Very cindery loamy sand, extremely cindery loamy sand	SP, SP-SM	A-1	0	0	100	10-25	5-20	2-10	20-30	NP-5
	33-48	Cinders	SP	A-1	0	0	100	5-10	5-10	0-5	0-10	NP
	48-54	Loamy sand, sand, coarse sand	SM	A-1, A-2	0	0	100	85-100	45-100	10-30	0-10	NP
	54-60	Fine sandy loam, gravelly fine sandy loam, very cobbly sandy loam	SM	A-1, A-2, A-4	0-5	5-25	65-95	50-85	30-70	15-50	20-30	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
74:												
Choralmont------	0-9	Cindery sandy loam	SM	A-1, A-2	0	0	100	50-75	30-50	15-30	25-30	NP-5
	9-17	Very cindery sandy loam	SM	A-1	0	0	100	25-50	20-40	10-25	25-30	NP-5
	17-33	Very cindery loamy sand, extremely cindery loamy sand	SP, SP-SM	A-1	0	0	100	10-25	5-20	2-10	20-30	NP-5
	33-48	Cinders	SP	A-1	0	0	100	5-10	5-10	0-5	0-10	NP
	48-54	Loamy sand, sand, coarse sand	SM	A-1, A-2	0	0	100	85-100	45-100	10-30	0-10	NP
	54-60	Fine sandy loam, gravelly fine sandy loam, very cobbly sandy loam	SM	A-1, A-2, A-4	0-5	5-25	65-95	50-85	30-70	15-50	20-30	NP-5
75:												
Choralmont------	0-11	Cindery sandy loam	SM	A-1, A-2	0	0	100	50-75	30-50	15-30	25-30	NP-5
	11-17	Very cindery sandy loam	SM	A-1	0	0	100	25-50	20-40	10-25	25-30	NP-5
	17-60	Cinders	SP	A-1	0	0	100	5-10	5-10	0-5	0-10	NP
Limking---------	0-4	Stony loam	ML	A-4	5-10	0-10	90-95	85-90	70-85	50-70	20-25	NP-5
	4-15	Gravelly sandy loam, very gravelly sandy loam, very stony sandy loam	SM	A-1	5-20	10-20	55-75	40-65	25-45	10-25	15-25	NP-5
	15-38	Very gravelly loamy sand, extremely gravelly loamy sand, very cobbly loamy sand	GM, GP-GM, SM, SP-SM	A-1	5-20	10-35	50-70	25-40	15-30	5-15	0-10	NP
	38-55	Very gravelly loamy sand, extremely gravelly loamy coarse sand, extremely cobbly sand	SP, SP-SM	A-1	5-20	5-30	50-65	25-40	10-20	0-10	0-10	NP
	55-59	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
76:												
Chumstick-------	0-4	Stony sandy loam	SM	A-2, A-4	5-10	5-20	70-95	65-90	40-70	25-40	15-20	NP-5
	4-14	Very stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-20	10-15	55-80	45-60	35-50	20-30	15-20	NP-5
	14-19	Extremely stony sandy loam, very cobbly sandy loam, extremely gravelly fine sandy loam	GM, SM	A-2, A-1	25-40	0-20	50-70	25-65	25-50	10-30	15-20	NP-5
	19-23	Unweathered bedrock			---	---	---	---	---	---	---	---
77:												
Chumstick-------	0-4	Stony sandy loam	SM	A-2, A-4	5-10	5-20	70-95	65-90	40-70	25-40	15-20	NP-5
	4-14	Very stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-20	10-15	55-80	45-60	35-50	20-30	15-20	NP-5
	14-19	Extremely stony sandy loam, very cobbly sandy loam, extremely gravelly fine sandy loam	GM, SM	A-2, A-1	25-40	0-20	50-70	25-65	25-50	10-30	15-20	NP-5
	19-23	Unweathered bedrock			---	---	---	---	---	---	---	---
78:												
Chumstick-------	0-4	Stony sandy loam	SM	A-2, A-4	5-10	5-20	70-95	65-90	40-70	25-40	15-20	NP-5
	4-14	Very stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-20	10-15	55-80	45-60	35-50	20-30	15-20	NP-5
	14-19	Extremely stony sandy loam, very cobbly sandy loam, extremely gravelly fine sandy loam	GM, SM	A-2, A-1	25-40	0-20	50-70	25-65	25-50	10-30	15-20	NP-5
	19-23	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
79:												
Cle Elum--------	0-14	Loam	CL-ML, ML	A-4	0	0	100	95-100	80-95	55-70	20-30	NP-10
	14-36	Clay loam, sandy clay loam	CL	A-6	0	0	100	80-100	70-100	50-80	30-40	15-20
	36-46	Weathered bedrock			---	---	---	---	---	---	---	---
80:												
Cle Elum--------	0-14	Loam	CL-ML, ML	A-4	0	0	100	95-100	80-95	55-70	20-30	NP-10
	14-36	Clay loam, sandy clay loam	CL	A-6	0	0	100	80-100	70-100	50-80	30-40	15-20
	36-46	Weathered bedrock			---	---	---	---	---	---	---	---
81:												
Coopmont--------	0-5	Fine sandy loam	ML	A-4	0	0	100	75-90	55-75	45-50	20-35	NP-5
	5-12	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0	100	60-75	45-60	20-35	20-35	NP-5
	12-28	Cindery loamy sand, cindery sandy loam	SM	A-1, A-2	0	0	100	50-70	35-55	15-30	20-35	NP-5
	28-50	Very gravelly sandy loam, very gravelly loam	GM	A-1, A-2	0-15	10-30	40-65	30-50	20-50	10-35	15-20	NP-5
	50-60	Extremely gravelly loamy sand, extremely gravelly sand	GP, GP-GM	A-1	10-25	15-50	20-45	10-35	5-25	0-10	0-10	NP
82:												
Coopmont--------	0-5	Fine sandy loam	ML	A-4	0	0	100	75-90	55-75	45-50	20-35	NP-5
	5-12	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0	100	60-75	45-60	20-35	20-35	NP-5
	12-28	Cindery loamy sand, cindery sandy loam	SM	A-1, A-2	0	0	100	50-70	35-55	15-30	20-35	NP-5
	28-50	Very gravelly sandy loam, very gravelly loam	GM	A-1, A-2	0-15	10-30	40-65	30-50	20-50	10-35	15-20	NP-5
	50-60	Extremely gravelly loamy sand, extremely gravelly sand	GP, GP-GM	A-1	10-25	15-50	20-45	10-35	5-25	0-10	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
83:												
Cowiche---------	0-10	Silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	80-100	65-90	15-30	NP-10
	10-20	Silt loam, loam	CL-ML, ML	A-4	0	0	95-100	90-100	75-100	55-90	15-30	NP-10
	20-50	Loam, clay loam, sandy clay loam	CL, SC	A-6	0	0-5	95-100	85-100	75-100	35-80	25-40	10-15
	50-60	Weathered bedrock			---	---	---	---	---	---	---	---
Cowiche, very deep------	0-10	Silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	75-95	50-90	15-30	NP-10
	10-25	Silt loam, loam	CL-ML, ML	A-4	0	0	95-100	90-100	75-95	50-90	15-30	NP-10
	25-45	Clay loam, sandy clay loam, loam	CL, SC	A-2, A-6	0	0-5	95-100	85-100	50-90	30-85	30-40	10-15
	45-60	Sandy loam, loamy fine sand, very fine sandy loam	SM	A-2, A-4	0	0-5	85-100	80-100	40-75	25-50	15-25	NP-5
84:												
Cowiche---------	0-10	Silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	80-100	65-90	15-30	NP-10
	10-20	Silt loam, loam	CL-ML, ML	A-4	0	0	95-100	90-100	75-100	55-90	15-30	NP-10
	20-50	Loam, clay loam, sandy clay loam	CL, SC	A-6	0	0-5	95-100	85-100	75-100	35-80	25-40	10-15
	50-60	Weathered bedrock			---	---	---	---	---	---	---	---
Cowiche, very deep------	0-10	Silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	75-95	50-90	15-30	NP-10
	10-25	Silt loam, loam	CL-ML, ML	A-4	0	0	95-100	90-100	75-95	50-90	15-30	NP-10
	25-45	Clay loam, sandy clay loam, loam	CL, SC	A-2, A-6	0	0-5	95-100	85-100	50-90	30-85	30-40	10-15
	45-60	Sandy loam, loamy fine sand, very fine sandy loam	SM	A-2, A-4	0	0-5	85-100	80-100	40-75	25-50	15-25	NP-5
85:												
Cryomont--------	0-5	Stony fine sandy loam	SM	A-2, A-4	5-10	5-10	70-80	60-70	40-60	25-40	15-20	NP-5
	5-12	Very gravelly loamy sand, very gravelly fine sandy loam, very cobbly fine sand	GM, GP-GM, SM, SP-SM	A-1	5-15	20-30	50-70	40-55	20-40	5-15	15-20	NP-5
	12-60	Extremely gravelly coarse sand, extremely gravelly sand, extremely cobbly sand	GW	A-1	5-15	25-35	40-50	20-35	10-20	0-5	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
86:												
Cryomont--------	0-4	Stony fine sandy loam	SM	A-2, A-4	5-10	5-10	70-80	60-70	40-60	25-40	15-20	NP-5
	4-12	Very gravelly loamy sand, very gravelly fine sandy loam, very cobbly fine sand	GM, GP-GM, SM, SP-SM	A-1	5-15	20-30	50-70	40-55	20-40	5-15	15-20	NP-5
	12-60	Extremely gravelly coarse sand, extremely gravelly sand, extremely cobbly sand	GW	A-1	5-15	25-35	40-50	20-35	10-20	0-5	0-10	NP
87:												
Cryomont--------	0-5	Stony fine sandy loam	SM	A-2, A-4	5-10	5-10	70-80	60-70	40-60	25-40	15-20	NP-5
	5-12	Very gravelly loamy sand, very gravelly fine sandy loam, very cobbly fine sand	GM, GP-GM, SM, SP-SM	A-1	5-15	20-30	50-70	40-55	20-40	5-15	15-20	NP-5
	12-60	Extremely gravelly coarse sand, extremely gravelly sand, extremely cobbly sand	GW	A-1	5-15	25-35	40-50	20-35	10-20	0-5	0-10	NP
Cryomont, fan---	0-4	Very stony fine sandy loam	SM	A-2, A-4	15-25	5-10	70-80	60-70	40-60	25-40	15-20	NP-5
	4-12	Very gravelly loamy sand, very gravelly fine sandy loam, very cobbly fine sand	GM, GP-GM, SM, SP-SM	A-1	5-15	20-30	50-70	40-55	20-40	5-15	15-20	NP-5
	12-60	Extremely gravelly coarse sand, extremely gravelly sand, extremely cobbly sand	GW	A-1	5-15	25-35	40-50	20-35	10-20	0-5	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
88:												
Culving---------	0-4	Gravelly loam	CL-ML, SC-SM	A-4	0-5	5-10	85-90	60-80	50-80	40-65	20-30	5-10
	4-8	Very gravelly loam, gravelly loam	CL, GC, SC	A-6	0-5	10-20	65-80	50-75	45-70	35-55	25-30	10-15
	8-21	Very gravelly loam, very gravelly clay loam, extremely gravelly clay loam	GC	A-2	0-10	5-25	40-50	15-40	15-40	10-30	25-35	10-20
	21-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
89:												
Culvop----------	0-10	Very gravelly loam	GM	A-2, A-4	0-5	0-25	50-60	45-50	35-50	25-40	25-30	NP-5
	10-16	Very gravelly loam, extremely gravelly loam	GM	A-1, A-2, A-4	0-5	0-25	40-60	25-50	20-40	15-40	25-30	NP-5
	16-20	Unweathered bedrock			---	---	---	---	---	---	---	---
90:												
Devore----------	0-2	Stony fine sandy loam	SM	A-1, A-2	15-20	5-15	65-85	55-75	35-50	15-30	0-10	NP
	2-25	Very stony sandy loam, extremely stony sandy loam, extremely cobbly sandy loam	GM	A-1	15-50	20-30	35-60	15-40	15-40	15-25	0-10	NP
	25-29	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
91:												
Dinkelman-------	0-15	Gravelly sandy loam	SM	A-1, A-2, A-4	0	0-10	85-95	60-75	40-60	20-40	20-30	NP-5
	15-42	Gravelly coarse sandy loam, gravelly sandy loam, gravelly loam	SM	A-1, A-2, A-4	0	0-20	80-95	60-80	25-50	20-40	20-30	NP-5
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
92:												
Dinkelman-------	0-15	Gravelly sandy loam	SM	A-1, A-2, A-4	0	0-10	85-95	60-75	40-60	20-40	20-30	NP-5
	15-42	Gravelly coarse sandy loam, gravelly sandy loam, gravelly loam	SM	A-1, A-2, A-4	0	0-20	80-95	60-80	25-50	20-40	20-30	NP-5
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
93:												
Dinkelman-------	0-15	Gravelly sandy loam	SM	A-1, A-2, A-4	0	0-10	85-95	60-75	40-60	20-40	20-30	NP-5
	15-42	Gravelly coarse sandy loam, gravelly sandy loam, gravelly loam	SM	A-1, A-2, A-4	0	0-20	80-95	60-80	25-50	20-40	20-30	NP-5
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
94:												
Dinkels---------	0-10	Fine sandy loam	SM	A-4	0	0-5	90-100	80-100	60-85	35-50	15-25	NP-5
	10-56	Sandy loam, loam, gravelly sandy loam	SM	A-2, A-4	0	0-10	80-95	60-90	50-60	25-50	15-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
95:												
Dinkels---------	0-10	Fine sandy loam	SM	A-4	0	0-5	90-100	80-100	60-85	35-50	15-25	NP-5
	10-56	Sandy loam, loam, gravelly sandy loam	SM	A-2, A-4	0	0-10	80-95	60-90	50-60	25-50	15-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
96:												
Dinkels---------	0-11	Gravelly sandy loam	SM	A-1, A-2	0	0-10	80-95	60-75	40-55	20-35	15-25	NP-5
	11-22	Sandy loam, loam, gravelly sandy loam	SM	A-2, A-4	0	0-10	80-95	60-90	50-60	25-50	15-25	NP-5
	22-59	Very gravelly coarse sandy loam, cobbly coarse sandy loam, gravelly coarse sandy loam	SM	A-1, A-2	0-2	0-25	60-85	50-75	30-40	15-30	0-10	NP
	59-63	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
97:												
Domkey----------	0-3	Sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	40-65	25-40	30-40	NP-5
	3-10	Sandy loam, fine sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	40-65	25-40	30-40	NP-5
	10-18	Gravelly sandy loam, fine sandy loam	SM	A-1, A-2	0	0-10	80-90	65-85	45-60	20-35	30-40	NP-5
	18-35	Gravelly coarse sandy loam, gravelly sandy loam	SM	A-1, A-2	0	0-15	85-95	65-75	40-60	20-35	30-40	NP-5
	35-45	Very gravelly loamy coarse sand, gravelly loamy coarse sand	SP-SM	A-1	0-5	0-15	65-75	45-65	20-35	5-10	0-10	NP
	45-55	Weathered bedrock			---	---	---	---	---	---	---	---
98:												
Domkey----------	0-3	Sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	40-65	25-40	30-40	NP-5
	3-10	Sandy loam, fine sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	40-65	25-40	30-40	NP-5
	10-18	Gravelly sandy loam, fine sandy loam	SM	A-1, A-2	0	0-10	80-90	65-85	45-60	20-35	30-40	NP-5
	18-35	Gravelly coarse sandy loam, gravelly sandy loam	SM	A-1, A-2	0	0-15	85-95	65-75	40-60	20-35	30-40	NP-5
	35-45	Very gravelly loamy coarse sand, gravelly loamy coarse sand	SP-SM	A-1	0-5	0-15	65-75	45-65	20-35	5-10	0-10	NP
	45-55	Weathered bedrock			---	---	---	---	---	---	---	---
99:												
Domkey----------	0-3	Sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	40-65	25-40	30-40	NP-5
	3-10	Sandy loam, fine sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	40-65	25-40	30-40	NP-5
	10-18	Gravelly sandy loam, fine sandy loam	SM	A-1, A-2	0	0-10	80-90	65-85	45-60	20-35	30-40	NP-5
	18-35	Gravelly coarse sandy loam, gravelly sandy loam	SM	A-1, A-2	0	0-15	85-95	65-75	40-60	20-35	30-40	NP-5
	35-45	Very gravelly loamy coarse sand, gravelly loamy coarse sand	SP-SM	A-1	0-5	0-15	65-75	45-65	20-35	5-10	0-10	NP
	45-55	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
99:												
McCree----------	0-5	Stony fine sandy loam	SM	A-1, A-2	5-10	10-20	60-80	55-75	40-60	20-35	30-35	NP-5
	5-19	Very stony fine sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	10-25	10-20	50-75	45-60	35-50	20-30	30-35	NP-5
	19-56	Extremely stony sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1	20-60	10-30	50-90	40-75	30-45	15-25	20-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
100:												
Dragoon---------	0-8	Fine sandy loam	SM	A-2, A-4	0	0	100	80-90	60-70	30-40	15-20	NP-5
	8-24	Loam, silt loam, clay loam	CL	A-6	0	0	100	85-100	85-100	60-80	30-40	10-20
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
101:												
Dragoon---------	0-10	Loam	CL-ML, ML	A-4	0	0	100	95-100	85-100	60-85	20-30	NP-10
	10-27	Loam, silt loam, clay loam	CL	A-6	0	0	100	85-100	85-100	60-80	30-40	10-20
	27-37	Weathered bedrock			---	---	---	---	---	---	---	---
102:												
Entiat----------	0-4	Gravelly fine sandy loam	SM	A-1, A-2	0	0-10	60-80	55-75	40-60	20-35	0-10	NP
	4-10	Very gravelly loam, very gravelly sandy loam, very gravelly fine sandy loam	SM	A-1, A-2	0	0-15	70-80	30-50	25-40	10-35	20-30	NP-5
	10-15	Very gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam	SM	A-1	0	0-15	60-70	25-40	15-35	10-25	20-30	NP-5
	15-25	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
103:												
Entiat----------	0-4	Gravelly fine sandy loam	SM	A-1, A-2	0	0-10	60-80	55-75	40-60	20-35	0-10	NP
	4-10	Very gravelly loam, very gravelly sandy loam, very gravelly fine sandy loam	SM	A-1, A-2	0	0-15	70-80	30-50	25-40	10-35	20-30	NP-5
	10-15	Very gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam	SM	A-1	0	0-15	60-70	25-40	15-35	10-25	20-30	NP-5
	15-25	Weathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
104:												
Entic Haplumbrepts---	0-3	Very cobbly sandy loam	SM	A-2	0-5	40-50	80-90	70-80	40-50	25-30	20-25	NP-5
	3-19	Extremely stony sandy loam, very cobbly sandy loam	SM	A-1	2-40	40-70	65-75	50-60	30-40	15-25	20-25	NP-5
	19-60	Extremely stony coarse sand, very cobbly loamy sand, very stony sandy loam	SW	A-1	2-40	40-70	60-70	40-50	20-35	0-5	15-20	NP-5
105:												
Esmeralda-------	0-4	Bouldery sandy loam	SM	A-1, A-2	5-10	10-20	60-80	50-70	40-50	20-35	20-25	NP-5
	4-12	Very cobbly sandy loam, cobbly sandy loam, cobbly loam	SM	A-2, A-4	0-10	15-35	75-90	70-80	50-60	25-45	25-30	NP-5
	12-35	Very cobbly sandy loam, extremely cobbly sandy loam, very cobbly loam	GM, SM	A-1, A-2	0-10	30-50	50-70	40-60	25-45	15-35	25-30	NP-5
	35-60	Extremely cobbly sandy loam, extremely gravelly sandy loam	GM	A-1	0-10	35-55	35-55	20-35	15-30	10-20	25-30	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
106:												
Esmeralda-------	0-4	Bouldery sandy loam	SM	A-1, A-2	5-10	10-20	60-80	50-70	40-50	20-35	20-25	NP-5
	4-12	Very cobbly sandy loam, cobbly sandy loam, cobbly loam	SM	A-2, A-4	0-10	15-35	75-90	70-80	50-60	25-45	25-30	NP-5
	12-35	Very cobbly sandy loam, extremely cobbly sandy loam, very cobbly loam	GM, SM	A-1, A-2	0-10	30-50	50-70	40-60	25-45	15-35	25-30	NP-5
	35-60	Extremely cobbly sandy loam, extremely gravelly sandy loam	GM	A-1	0-10	35-55	35-55	20-35	15-30	10-20	25-30	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
107:												
Fears-----------	0-2	Stony fine sandy loam	SM	A-2, A-4	10-15	10-20	85-95	80-90	55-75	30-50	25-30	NP-5
	2-10	Cobbly fine sandy loam, stony fine sandy loam, gravelly fine sandy loam	SM	A-2, A-4	5-15	5-10	85-95	70-85	55-75	30-50	25-30	NP-5
	10-20	Very cobbly fine sandy loam, very gravelly fine sandy loam, gravelly fine sandy loam	SM	A-2, A-4	0-25	10-35	70-80	45-75	40-60	25-40	25-30	NP-5
	20-32	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam, extremely cobbly loamy sand	GP-GM	A-1	0-25	25-50	40-50	10-20	5-15	5-10	25-30	NP-5
	32-60	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam, extremely cobbly loamy sand	GP, GP-GM	A-1	0-25	25-50	40-50	10-20	5-15	0-10	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
108:												
Fears-----------	0-2	Stony fine sandy loam	SM	A-2, A-4	10-15	10-20	85-95	80-90	55-75	30-50	25-30	NP-5
	2-10	Cobbly fine sandy loam, stony fine sandy loam, gravelly fine sandy loam	SM	A-2, A-4	5-15	5-10	85-95	70-85	55-75	30-50	25-30	NP-5
	10-20	Very cobbly fine sandy loam, very gravelly fine sandy loam, gravelly fine sandy loam	SM	A-2, A-4	0-25	10-35	70-80	45-75	40-60	25-40	25-30	NP-5
	20-32	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam, extremely cobbly loamy sand	GP-GM	A-1	0-25	25-50	40-50	10-20	5-15	5-10	25-30	NP-5
	32-60	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam, extremely cobbly loamy sand	GP, GP-GM	A-1	0-25	25-50	40-50	10-20	5-15	0-10	0-10	NP
Devore----------	0-2	Stony fine sandy loam	SM	A-1, A-2	15-20	5-15	65-85	55-75	35-50	15-30	0-10	NP
	2-25	Very stony sandy loam, extremely stony sandy loam, extremely cobbly sandy loam	GM	A-1	15-50	20-30	35-60	15-40	15-40	15-25	0-10	NP
	25-29	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
109:												
Fernow----------	0-5	Loam	MH, ML	A-5, A-7	0	0	95-100	90-100	75-95	55-75	30-40	NP-15
	5-27	Loam, sandy loam, cindery sandy loam	ML, SM, MH	A-2, A-4, A-5, A-6	0	0	95-100	60-100	50-85	25-60	35-55	NP-15
	27-46	Very cindery loam, extremely cindery sandy loam, extremely cindery loamy sand	SM, SP-SM	A-1, A-2	0	0	95-100	15-50	10-40	5-30	30-50	NP-15
	46-60	Cinders	SP	A-1	0	0	95-100	5-10	0-10	0-5	0-10	NP
110:												
Fernow----------	0-5	Loam	MH, ML	A-5, A-7	0	0	95-100	90-100	75-95	55-75	30-40	NP-15
	5-27	Loam, sandy loam, cindery sandy loam	ML, SM, MH	A-2, A-4, A-5, A-6	0	0	95-100	60-100	50-85	25-60	35-55	NP-15
	27-46	Very cindery loam, extremely cindery sandy loam, extremely cindery loamy sand	SM, SP-SM	A-1, A-2	0	0	95-100	15-50	10-40	5-30	30-50	NP-15
	46-60	Cinders	SP	A-1	0	0	95-100	5-10	0-10	0-5	0-10	NP
111:												
Fernow----------	0-5	Loam	MH, ML	A-5, A-7	0	0	95-100	90-100	75-95	55-75	30-40	NP-15
	5-27	Loam, sandy loam, cindery sandy loam	ML, SM, MH	A-2, A-4, A-5, A-6	0	0	95-100	60-100	50-85	25-60	35-55	NP-15
	27-46	Very cindery loam, extremely cindery sandy loam, extremely cindery loamy sand	SM, SP-SM	A-1, A-2	0	0	95-100	15-50	10-40	5-30	30-50	NP-15
	46-60	Cinders	SP	A-1	0	0	95-100	5-10	0-10	0-5	0-10	NP
Serene----------	0-4	Gravelly sandy loam	SM	A-2	0	5-10	85-95	65-75	50-65	25-35	15-25	NP-5
	4-8	Gravelly sandy loam, cobbly sandy loam	SM	A-2	0-5	10-20	80-90	75-85	50-60	20-35	15-25	NP-5
	8-13	Gravelly sandy loam, cobbly sandy loam, very cobbly loamy sand	SM	A-1, A-2	0-10	10-30	55-85	45-75	25-55	10-30	15-25	NP-5
	13-24	Very cobbly loamy coarse sand, very gravelly loamy sand	SM	A-1	0-15	10-50	65-75	35-55	25-40	10-20	0-10	NP
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
112:												
Fluvaquents-----	0-16	Silt loam	CL-ML	A-4	0	0	100	95-100	85-100	65-80	25-30	5-10
	16-23	Loamy fine sand, silt loam, loam	ML, SM	A-2, A-4	0	0	100	95-100	50-90	15-80	15-20	NP-5
	23-29	Sand, loamy fine sand, very fine sandy loam	ML, SM	A-2, A-3, A-4	0	0	100	95-100	50-90	5-65	0-10	NP
	29-60	Stratified sand to gravelly very fine sandy loam	SM	A-1, A-2, A-3, A-4	0	0-5	95-100	75-100	40-95	5-50	15-20	NP-5
113:												
Georgecreek-----	0-10	Fine sandy loam	SM	A-4	0	0	90-100	80-100	70-80	35-50	20-25	NP-5
	10-42	Clay loam, gravelly loam, sandy clay loam	CL, SC	A-6	0	0	80-100	65-100	60-85	45-70	30-40	10-20
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
114:												
Georgecreek-----	0-10	Fine sandy loam	SM	A-4	0	0	90-100	80-100	70-80	35-50	20-25	NP-5
	10-42	Clay loam, gravelly loam, sandy clay loam	CL, SC	A-6	0	0	80-100	65-100	60-85	45-70	30-40	10-20
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
115:												
Georgecreek-----	0-10	Fine sandy loam	SM	A-4	0	0	90-100	80-100	70-80	35-50	20-25	NP-5
	10-42	Clay loam, gravelly loam, sandy clay loam	CL, SC	A-6	0	0	80-100	65-100	60-85	45-70	30-40	10-20
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
116:												
Georgecreek-----	0-10	Fine sandy loam	SM	A-4	0	0	90-100	80-100	70-80	35-50	20-25	NP-5
	10-42	Clay loam, gravelly loam, sandy clay loam	CL, SC	A-6	0	0	80-100	65-100	60-85	45-70	30-40	10-20
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
Dragoon---------	0-8	Fine sandy loam	SM	A-2, A-4	0	0	100	80-90	60-70	30-40	15-20	NP-5
	8-24	Loam, silt loam, clay loam	CL	A-6	0	0	100	85-100	85-100	60-80	30-40	10-20
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
117:												
Georgecreek-----	0-6	Fine sandy loam	SM	A-4	0	0	90-100	80-100	70-80	35-50	20-25	NP-5
	6-19	Loam, silt loam	CL, CL-ML	A-4, A-6	0	0	85-100	75-100	70-90	50-75	25-35	5-15
	19-53	Clay loam, gravelly loam, sandy clay loam	CL, SC	A-6	0	0	80-100	65-95	60-85	45-70	30-40	10-20
	53-63	Weathered bedrock			---	---	---	---	---	---	---	---
Dragoon---------	0-8	Fine sandy loam	SM	A-2, A-4	0	0	100	80-90	60-70	30-40	15-20	NP-5
	8-24	Loam, silt loam, clay loam	CL	A-6	0	0	100	85-100	85-100	60-80	30-40	10-20
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
118:												
Gilpar----------	0-6	Very stony sandy loam	SM	A-1, A-2	10-20	10-25	65-75	55-65	35-45	20-30	20-25	NP-5
	6-28	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM	A-1, A-2	0-15	15-25	45-65	30-60	30-45	10-30	20-25	NP-5
	28-60	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM, SM	A-1	0-10	15-25	45-65	30-50	30-40	10-25	20-25	NP-5
119:												
Gilpar----------	0-6	Very stony sandy loam	SM	A-1, A-2	10-20	10-25	65-75	55-65	35-45	20-30	20-25	NP-5
	6-28	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM	A-1, A-2	0-15	15-25	45-65	30-60	30-45	10-30	20-25	NP-5
	28-60	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM, SM	A-1	0-10	15-25	45-65	30-50	30-40	10-25	20-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
119:												
Nimue-----------	0-7	Cobbly fine sandy loam	SM	A-2, A-4	0-10	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	7-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5
120:												
Gilpar----------	0-6	Very stony sandy loam	SM	A-1, A-2	10-20	10-25	65-75	55-65	35-45	20-30	20-25	NP-5
	6-28	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM	A-1, A-2	0-15	15-25	45-65	30-60	30-45	10-30	20-25	NP-5
	28-60	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM, SM	A-1	0-10	15-25	45-65	30-50	30-40	10-25	20-25	NP-5
Nimue-----------	0-2	Bouldery sandy loam	SM	A-2, A-4	10-15	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	2-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
121:												
Gilpar----------	0-6	Very stony sandy loam	SM	A-1, A-2	10-20	10-25	65-75	55-65	35-45	20-30	20-25	NP-5
	6-28	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM	A-1, A-2	0-15	15-25	45-65	30-60	30-45	10-30	20-25	NP-5
	28-60	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM, SM	A-1	0-10	15-25	45-65	30-50	30-40	10-25	20-25	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
122:												
Glaciers, snowfields-----	0-60	Consolidated permafrost (ice rich)			---	---	---	---	---	---	---	---
123:												
Goffpeak--------	0-13	Cindery sandy loam	SM	A-1, A-2	0	0-5	95-100	60-75	45-60	20-35	20-25	NP-5
	13-26	Cindery sandy loam, cindery fine sandy loam, cindery loamy sand	SM	A-1, A-2	0	0-5	95-100	60-75	40-70	15-35	20-25	NP-5
	26-42	Very cindery sandy loam, extremely cindery sandy loam, extremely cindery fine sandy loam	SM, SP-SM	A-1	0-5	0-5	95-100	15-40	10-35	5-20	20-25	NP-5
	42-46	Unweathered bedrock			---	---	---	---	---	---	---	---
124:												
Goffpeak--------	0-13	Cindery sandy loam	SM	A-1, A-2	0	0-5	95-100	60-75	45-60	20-35	20-25	NP-5
	13-26	Cindery sandy loam, cindery fine sandy loam, cindery loamy sand	SM	A-1, A-2	0	0-5	95-100	60-75	40-70	15-35	20-25	NP-5
	26-42	Very cindery sandy loam, extremely cindery sandy loam, extremely cindery fine sandy loam	SM, SP-SM	A-1	0-5	0-5	95-100	15-40	10-35	5-20	20-25	NP-5
	42-46	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
124:												
Fears-----------	0-2	Stony fine sandy loam	SM	A-2, A-4	10-15	10-20	85-95	80-90	55-75	30-50	25-30	NP-5
	2-10	Cobbly fine sandy loam, stony fine sandy loam, gravelly fine sandy loam	SM	A-2, A-4	5-15	5-10	85-95	70-85	55-75	30-50	25-30	NP-5
	10-20	Very cobbly fine sandy loam, very gravelly fine sandy loam, gravelly fine sandy loam	SM	A-2, A-4	0-25	10-35	70-80	45-75	40-60	25-40	25-30	NP-5
	20-32	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam, extremely cobbly loamy sand	GP-GM	A-1	0-25	25-50	40-50	10-20	5-15	5-10	25-30	NP-5
	32-60	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam, extremely cobbly loamy sand	GP, GP-GM	A-1	0-25	25-50	40-50	10-20	5-15	0-10	0-10	NP
125:												
Haplocryods, cold-----------	0-4	Silt loam	ML	A-4	0	0-5	90-100	80-100	80-95	60-80	20-25	NP-5
	4-10	Silt loam, loam, gravelly sandy loam	ML, SM	A-2, A-4	0	0-10	70-90	60-85	50-80	25-60	15-25	NP-5
	10-15	Gravelly loam, gravelly sandy loam, very gravelly loamy sand	SM	A-1, A-2, A-4	0	0-15	60-80	40-75	30-65	10-45	15-25	NP-5
	15-25	Gravelly sandy loam, very gravelly sandy loam, very gravelly loamy sand	GM, SM	A-1	0	0-15	50-80	40-70	25-50	10-25	15-20	NP-5
	25-29	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
125:												
Haplocryods, stony----------	0-3	Stony sandy loam	SM	A-2, A-4	5-15	5-10	95-100	90-100	45-75	30-40	20-30	NP-5
	3-32	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0-5	5-10	95-100	80-100	55-70	30-40	20-30	NP-5
	32-60	Extremely cobbly loam, very cobbly sandy loam, very stony loam	ML, SM	A-1, A-2, A-4	15-25	30-50	70-85	55-75	35-75	20-55	20-30	NP-5
126:												
Haplocryods-----	0-6	Loam	ML	A-4	0-5	0-5	90-100	80-95	70-90	50-70	20-25	NP-5
	6-15	Gravelly sandy loam, gravelly loam, cobbly sandy loam	SM	A-1, A-2, A-4	0	0-15	75-85	55-80	25-60	10-45	15-25	NP-5
	15-29	Very gravelly sandy loam, very gravelly loam	GM, SM	A-1, A-2, A-4	0-5	10-20	50-80	30-55	15-45	10-40	15-25	NP-5
	29-52	Very gravelly loam, very gravelly sandy loam, extremely gravelly loamy sand	GM, SM	A-1, A-2	0-5	10-25	40-70	25-50	15-45	10-35	15-25	NP-5
	52-56	Unweathered bedrock			---	---	---	---	---	---	---	---
Andic Cryochrepts----	0-4	Extremely stony loam	ML, SM	A-2, A-4, A-1	25-40	10-40	60-100	30-90	20-85	10-70	20-30	NP-5
	4-10	Very cobbly loam, very gravelly fine sandy loam, gravelly fine sandy loam	ML, SM	A-1, A-2, A-4	0-10	5-35	70-100	60-90	40-85	25-70	20-30	NP-5
	10-60	Very cobbly loam, gravelly loam, gravelly fine sandy loam	ML, SM	A-1, A-2, A-4	0-10	5-45	70-90	60-90	40-85	25-70	20-30	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
127:												
Haploxerolls----	0-10	Very stony fine sandy loam	GM	A-1, A-2	10-15	5-20	55-65	40-50	30-45	20-30	20-30	NP-5
	10-26	Very stony sandy loam, extremely gravelly loam, very fine sandy loam	GM, ML	A-1, A-2, A-4	10-25	5-20	45-95	30-90	20-85	15-65	15-25	NP-5
	26-60	Extremely cobbly loamy sand, very cobbly sandy loam, very fine sandy loam	GM, GP, GP-GM, ML	A-1, A-2, A-4	0-15	5-25	25-95	15-90	10-85	0-65	0-15	NP-5
128:												
Haploxerolls----	0-10	Very stony fine sandy loam	GM	A-1, A-2	10-15	5-20	55-65	40-50	30-45	20-30	20-30	NP-5
	10-26	Very stony sandy loam, extremely gravelly loam, very fine sandy loam	GM, ML	A-1, A-2, A-4	10-25	5-20	45-95	30-90	20-85	15-65	15-25	NP-5
	26-60	Extremely cobbly loamy sand, very cobbly sandy loam, very fine sandy loam	GM, GP, GP-GM, ML	A-1, A-2, A-4	0-15	5-25	25-95	15-90	10-85	0-65	0-15	NP-5
129:												
Humicryods------	0-2	Bouldery loamy sand	SM	A-1, A-2	5-10	0-10	95-100	90-95	45-70	15-25	20-25	NP-5
	2-10	Fine sandy loam, cobbly sandy loam, cobbly loam	ML, SM	A-2, A-4	0-5	0-30	90-100	80-95	35-85	25-60	25-30	NP-5
	10-20	Very cobbly sandy loam, very cobbly loam	SM	A-1, A-2, A-4	10-25	15-30	80-90	45-65	40-60	20-45	25-30	NP-5
	20-39	Very cobbly loamy coarse sand, very cobbly sandy loam	SM	A-3, A-1, A-2	10-25	15-40	80-90	55-65	35-60	5-30	20-25	NP-5
	39-49	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
129:												
Andic Cryumbrepts----	0-4	Extremely stony sandy loam	SM	A-1, A-2	50-60	10-15	65-85	55-75	40-50	20-30	30-40	NP-5
	4-10	Very cobbly loam, gravelly sandy loam, very gravelly sandy loam, gravelly fine sandy loam	GM, SM	A-1, A-2	0-5	10-15	55-85	50-65	35-45	20-30	30-40	NP-5
	10-60	Extremely gravelly sandy loam, extremely gravelly coarse sandy loam, very cobbly loam	GM, SM	A-1	0-10	20-30	40-80	20-65	15-40	10-25	30-40	NP-5
130:												
Humicryods------	0-2	Bouldery loamy sand	SM	A-1, A-2	5-10	0-10	95-100	90-95	45-70	15-25	20-25	NP-5
	2-10	Fine sandy loam, cobbly sandy loam, cobbly loam	ML, SM	A-2, A-4	0-5	0-30	90-100	80-95	35-85	25-60	25-30	NP-5
	10-20	Very cobbly sandy loam, very cobbly loam	SM	A-1, A-2, A-4	10-25	15-30	80-90	45-65	40-60	20-45	25-30	NP-5
	20-39	Very cobbly loamy coarse sand, very cobbly sandy loam	SM	A-3, A-1, A-2	10-25	15-40	80-90	55-65	35-60	5-30	20-25	NP-5
	39-49	Weathered bedrock			---	---	---	---	---	---	---	---
Andic Cryochrepts----	0-4	Extremely stony loam	ML, SM	A-1, A-2, A-4	5-40	10-40	60-100	30-90	20-85	10-70	20-30	NP-5
	4-10	Very cobbly loam, very gravelly fine sandy loam, gravelly fine sandy loam	ML, SM	A-1, A-2, A-4	0-10	5-35	70-100	60-90	40-85	25-70	20-30	NP-5
	10-60	Very cobbly loam, gravelly loam, gravelly fine sandy loam	ML, SM	A-1, A-2, A-4	0-10	5-45	70-90	60-90	40-85	25-70	20-30	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
131:												
Humicryods------	0-2	Bouldery loamy sand	SM	A-1, A-2	5-10	0-10	95-100	90-95	45-70	15-25	20-25	NP-5
	2-10	Fine sandy loam, cobbly sandy loam, cobbly loam	ML, SM	A-2, A-4	0-5	0-30	90-100	80-95	35-85	25-60	25-30	NP-5
	10-20	Very cobbly sandy loam, very cobbly loam	SM	A-1, A-2, A-4	10-25	15-40	80-90	45-65	40-60	20-45	25-30	NP-5
	20-39	Very cobbly loamy coarse sand, very cobbly sandy loam	SM	A-3, A-1, A-2	10-25	15-40	80-90	55-65	35-60	5-30	20-25	NP-5
	39-49	Weathered bedrock			---	---	---	---	---	---	---	---
Andic Cryumbrepts----	0-10	Sandy loam	SM	A-2, A-4	0	0-5	90-100	80-100	50-70	25-40	25-40	NP-5
	10-16	Gravelly sandy loam, gravelly loam	SM	A-1, A-2, A-4	0	0-5	70-90	55-80	40-70	20-50	20-30	NP-5
	16-33	Very gravelly sandy loam, gravelly sandy loam, very gravelly loamy sand	SM, SP-SM	A-1, A-2	0	5-10	60-75	45-65	25-50	5-25	15-25	---
	33-51	Very gravelly sandy loam, very gravelly loamy sand	SM, SP-SM	A-1, A-2	0	5-15	50-70	35-60	20-45	5-25	15-25	---
	51-55	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
132:												
Hyprairie-------	0-22	Silt loam	CL-ML	A-4	0	0	100	95-100	85-100	65-85	20-30	5-10
	22-60	Silty clay loam, clay loam	ML	A-6, A-7	0	0-10	75-100	85-100	80-100	65-80	35-45	10-15
133:												
Hyprairie-------	0-22	Silt loam	CL-ML	A-4	0	0	100	95-100	85-100	65-85	20-30	5-10
	22-60	Silty clay loam, clay loam	ML	A-6, A-7	0	0-10	95-100	75-100	80-100	65-80	35-45	10-15
134:												
Hyprairie-------	0-22	Silt loam	CL-ML	A-4	0	0	100	95-100	85-100	65-85	20-30	5-10
	22-60	Silty clay loam, clay loam	ML	A-6, A-7	0	0-10	95-100	75-100	80-100	65-80	35-45	10-15

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
134:												
Oldbutte--------	0-17	Silt loam	CL-ML	A-4	0	0	100	95-100	85-100	65-85	20-30	5-10
	17-36	Clay loam, silty clay loam	CL	A-6	0	0	100	95-100	85-100	65-85	30-40	10-15
	36-60	Loam, clay loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	60-85	25-35	5-15
135:												
Icicle, south---	0-5	Bouldery sandy loam	SM	A-2	5-10	0-10	80-95	70-90	40-65	25-35	15-20	NP-5
	5-24	Very stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	0-25	10-60	60-90	50-80	35-60	20-40	15-20	NP-5
	24-60	Extremely stony sandy loam, very cobbly sandy loam	SM	A-1, A-2	10-50	25-55	60-90	50-80	30-60	20-35	15-20	NP-5
Icicle----------	0-5	Very bouldery sandy loam	SM	A-2	10-20	35-60	80-95	70-90	50-70	25-35	15-20	NP-5
	5-20	Very stony sandy loam, extremely cobbly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	0-15	10-60	60-90	50-80	35-60	20-40	15-20	NP-5
	20-60	Extremely cobbly sandy loam, very cobbly sandy loam	SM	A-1, A-2	10-20	25-55	60-90	50-80	30-60	20-35	15-20	NP-5
136:												
Icicle----------	0-5	Bouldery sandy loam	SM	A-2	5-10	0-10	80-95	70-90	40-65	25-35	15-20	NP-5
	5-24	Very stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	0-25	10-60	60-90	50-80	35-60	20-40	15-20	NP-5
	24-60	Extremely stony sandy loam, very cobbly sandy loam	SM	A-1, A-2	10-50	25-55	60-90	50-80	30-60	20-35	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
137:												
Icicle----------	0-5	Very bouldery sandy loam	SM	A-2	10-20	35-60	80-95	70-90	50-70	25-35	15-20	NP-5
	5-20	Very stony sandy loam, extremely cobbly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	0-15	10-60	60-90	50-80	35-60	20-40	15-20	NP-5
	20-60	Very cobbly sandy loam, extremely cobbly sandy loam	SM	A-1, A-2	10-20	25-55	60-90	50-80	30-60	20-35	15-20	NP-5
138:												
Icicle----------	0-5	Very bouldery sandy loam	SM	A-2	10-20	35-60	80-95	70-90	50-70	25-35	15-20	NP-5
	5-20	Very stony sandy loam, extremely cobbly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	0-15	10-60	60-90	50-80	35-60	20-40	15-20	NP-5
	20-60	Very cobbly sandy loam, extremely cobbly sandy loam	SM	A-1, A-2	10-20	25-55	60-90	50-80	30-60	20-35	15-20	NP-5
139:												
Icicle----------	0-5	Stony fine sandy loam	SM	A-2, A-4	5-10	0-10	80-95	70-90	50-70	30-40	15-20	NP-5
	5-30	Very stony loam, very cobbly sandy loam, very gravelly sandy loam	SM	A-4, A-1, A-2	0-25	10-60	60-90	50-80	35-60	20-40	15-20	NP-5
	30-60	Extremely stony sandy loam, very cobbly sandy loam	SM	A-1, A-2	10-50	25-55	60-90	50-80	30-60	20-35	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
140:												
Icicle----------	0-8	Very bouldery sandy loam	SM	A-2	10-20	35-60	80-95	70-90	40-65	25-35	15-20	NP-5
	8-28	Extremely stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	10-30	10-50	60-90	50-80	35-60	20-40	15-20	NP-5
	28-50	Extremely stony sandy loam, very cobbly sandy loam, extremely cobbly sandy loam	SM	A-1, A-2	10-30	25-50	60-90	50-80	30-60	20-35	15-20	NP-5
	50-54	Unweathered bedrock			---	---	---	---	---	---	---	---
Chumstick-------	0-4	Stony sandy loam	SM	A-2, A-4	5-10	5-20	70-95	65-90	40-70	25-40	15-20	NP-5
	4-14	Very stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-20	10-15	55-80	45-60	35-50	20-30	15-20	NP-5
	14-19	Extremely stony sandy loam, very cobbly sandy loam, extremely gravelly fine sandy loam	GM, SM	A-2, A-1	25-40	0-20	50-70	25-65	25-50	10-30	15-20	NP-5
	19-23	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
141:												
Icicle----------	0-8	Very bouldery sandy loam	SM	A-2	10-20	35-60	80-95	70-90	40-65	25-35	15-20	NP-5
	8-28	Extremely stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	10-30	10-50	60-90	50-80	35-60	20-40	15-20	NP-5
	28-50	Extremely stony sandy loam, very cobbly sandy loam, extremely cobbly sandy loam	SM	A-1, A-2	10-30	25-50	60-90	50-80	30-60	20-35	15-20	NP-5
	50-54	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
141:												
Chumstick-------	0-4	Stony sandy loam	SM	A-2, A-4	5-10	5-20	70-95	65-90	40-70	25-40	15-20	NP-5
	4-14	Very stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-20	10-15	55-80	45-60	35-50	20-30	15-20	NP-5
	14-19	Extremely stony sandy loam, very cobbly sandy loam, extremely gravelly fine sandy loam	GM, SM	A-2, A-1	25-40	0-15	50-70	25-65	25-50	10-30	15-20	NP-5
	19-23	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
142:												
Inkler----------	0-4	Stony fine sandy loam	SM	A-2, A-4	5-15	0-15	75-85	65-75	45-65	25-40	20-30	NP-5
	4-10	Very cobbly sandy loam, very gravelly fine sandy loam	GM, SM	A-1, A-2	0-15	0-25	50-70	30-50	20-50	10-35	20-30	NP-5
	10-29	Very stony sandy loam, very cobbly fine sandy loam	GM, GP-GM	A-1, A-2	0-30	0-25	40-60	20-50	15-40	5-30	15-25	NP-5
	29-44	Extremely cobbly sandy loam, extremely cobbly fine sandy loam	GM, GP, SM, SP	A-1	0-30	0-40	40-60	15-40	10-30	0-15	0-10	NP
	44-48	Unweathered bedrock			---	---	---	---	---	---	---	---
143:												
Isella----------	0-6	Loam	ML	A-4	0	0	95-100	95-100	80-95	60-75	25-35	NP-5
	6-20	Loam, fine sandy loam	ML, SM	A-4	0	0	90-100	85-100	70-90	40-65	25-35	NP-5
	20-50	Loam, fine sandy loam, very fine sandy loam	ML, SM	A-4	0	0	90-100	85-100	70-90	40-65	25-35	NP-5
	50-60	Sandy loam, gravelly sandy loam, gravelly loam	SM	A-2, A-4	0	0-10	80-90	65-85	45-70	25-50	25-35	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
143:												
Fernow----------	0-5	Loam	MH, ML	A-5, A-7	0	0	95-100	90-100	75-95	55-75	30-40	NP-15
	5-27	Loam, sandy loam, cindery sandy loam	ML, SM, MH	A-2, A-4, A-5, A-6	0	0	95-100	60-100	50-85	25-60	35-55	NP-15
	27-46	Very cindery loam, extremely cindery sandy loam, extremely cindery loamy sand	SM, SP-SM	A-1, A-2	0	0	95-100	15-50	10-40	5-30	30-50	NP-15
	46-60	Cinders	SP	A-1	0	0	95-100	5-10	0-10	0-5	0-10	NP
144:												
Isella----------	0-6	Loam	ML	A-4	0	0	95-100	95-100	80-95	60-75	25-35	NP-5
	6-20	Loam, fine sandy loam	ML, SM	A-4	0	0	90-100	85-100	70-90	40-65	25-35	NP-5
	20-50	Loam, fine sandy loam, very fine sandy loam	ML, SM	A-4	0	0	90-100	85-100	70-90	40-65	25-35	NP-5
	50-60	Sandy loam, gravelly sandy loam, gravelly loam	SM	A-2, A-4	0	0-10	80-90	65-85	45-70	25-50	25-35	NP-5
Fernow----------	0-5	Loam	MH, ML	A-5, A-7	0	0	95-100	90-100	75-95	55-75	30-40	NP-15
	5-27	Loam, sandy loam, cindery sandy loam	ML, SM, MH	A-2, A-4, A-5, A-6	0	0	95-100	60-100	50-85	25-60	35-55	NP-15
	27-46	Very cindery loam, extremely cindery sandy loam, extremely cindery loamy sand	SM, SP-SM	A-1, A-2	0	0	95-100	15-50	10-40	5-30	30-50	NP-15
	46-60	Cinders	SP	A-1	0	0	95-100	5-10	0-10	0-5	0-10	NP
145:												
Isella----------	0-2	Loam	ML	A-4	0	0	95-100	95-100	80-95	60-75	25-35	NP-5
	2-24	Loam, fine sandy loam	ML, SM	A-4	0	0	90-100	85-100	70-90	40-65	25-35	NP-5
	24-60	Loam, fine sandy loam, very fine sandy loam	ML, SM	A-4	0	0	90-100	85-100	70-90	40-65	25-35	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
145:												
Nimue-----------	0-7	Cobbly fine sandy loam	SM	A-2, A-4	0-10	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	7-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5
146:												
Isella----------	0-2	Loam	ML	A-4	0	0	95-100	95-100	80-95	60-75	25-35	NP-5
	2-24	Loam, fine sandy loam	ML, SM	A-4	0	0	90-100	85-100	70-90	40-65	25-35	NP-5
	24-60	Loam, fine sandy loam, very fine sandy loam	ML, SM	A-4	0	0	90-100	85-100	70-90	40-65	25-35	NP-5
Nimue-----------	0-2	Bouldery sandy loam	SM	A-2, A-4	10-15	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	2-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5
147:												
Kingmont--------	0-14	Gravelly loam	SC-SM	A-4	0-5	10-20	70-80	60-70	55-65	40-50	20-30	5-10
	14-28	Very gravelly loam, extremely gravelly loam	GC-GM	A-2	0-10	5-20	30-40	20-40	15-40	10-30	20-30	5-10
	28-60	Very gravelly clay loam, extremely gravelly clay loam	GC	A-2	0-10	5-30	35-40	25-35	25-30	20-25	40-50	20-25

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
148:												
Kladnick--------	0-14	Cobbly fine sandy loam	SM	A-2	0-10	10-30	75-90	70-80	55-70	25-35	20-25	NP-5
	14-21	Very gravelly loamy sand, extremely gravelly loamy sand	GM	A-1	0-10	0-20	45-60	25-55	20-40	10-25	0-10	NP
	21-60	Extremely cobbly sand, extremely cobbly coarse sand, extremely gravelly sand	GP, GP-GM	A-1	5-15	25-55	30-40	20-35	5-15	0-10	0-10	NP
149:												
Kladnick--------	0-8	Gravelly fine sandy loam	SM	A-2	0	0-15	75-80	65-75	40-65	25-45	20-30	NP-5
	8-19	Very gravelly loamy sand, very gravelly sandy loam, extremely gravelly loamy sand	GM	A-1	0-5	5-20	45-60	25-55	20-40	10-25	0-10	NP
	19-60	Extremely gravelly sand, extremely cobbly sand, very gravelly loamy sand	GP, GP-GM	A-1	0-10	10-45	30-50	25-40	5-15	0-10	0-10	NP
150:												
Kladnick--------	0-6	Very stony sandy loam	GM	A-1, A-2	15-20	15-20	50-80	40-75	15-30	10-20	15-20	NP-5
	6-11	Very gravelly loamy sand, extremely gravelly loamy sand	GM	A-1	0-10	0-20	45-60	25-55	20-40	10-25	0-10	NP
	11-60	Extremely cobbly sand, extremely cobbly coarse sand, extremely gravelly sand	GP, GP-GM	A-1	5-15	25-55	30-40	20-35	5-15	0-10	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
151:												
Klapatche-------	0-4	Very stony loamy sand	SM	A-1, A-2	25-45	0-20	95-100	85-95	45-70	15-30	25-30	NP-5
	4-12	Gravelly sandy loam, gravelly loamy sand	SM	A-1, A-2	0	0-10	80-90	70-80	45-55	20-30	25-30	NP-5
	12-26	Very cobbly loamy sand, extremely gravelly sand	GM, GP-GM, SM, SP-SM	A-1	0-5	10-45	35-60	20-50	15-35	5-15	0-10	NP
	26-37	Extremely gravelly sand, very gravelly sand, very cobbly loamy sand	GP, SP	A-1	0-10	25-40	35-60	30-55	10-25	0-5	0-10	NP
	37-47	Weathered bedrock			---	---	---	---	---	---	---	---
Altapeak--------	0-13	Gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-85	50-75	35-60	20-35	15-20	NP-5
	13-29	Very cobbly loamy sand, very stony loamy sand, very cobbly sandy loam	GM, SM	A-1	0-30	5-30	40-60	30-50	20-35	10-20	15-20	NP-5
	29-54	Extremely stony loamy sand, extremely gravelly coarse sand, very gravelly loamy coarse sand	GP, GP-GM, SP, SP-SM	A-1	5-40	0-40	35-65	25-55	15-25	0-10	0-10	NP
	54-64	Weathered bedrock			---	---	---	---	---	---	---	---
152:												
Kloochman-------	0-3	Gravelly fine sandy loam	SM	A-2, A-4	0	0-10	70-85	60-75	45-65	25-40	15-25	NP-5
	3-18	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	5-15	70-85	55-75	40-65	20-40	15-25	NP-5
	18-34	Very channery sandy loam, very cobbly sandy loam, extremely flaggy sandy loam	GM, GP-GM	A-1	10-15	30-50	45-60	35-50	15-30	10-25	0-10	NP
	34-38	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
153:												
Kloochman-------	0-3	Gravelly fine sandy loam	SM	A-2, A-4	0	0-10	70-85	60-75	45-65	25-40	15-25	NP-5
	3-18	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	5-15	70-85	55-75	40-65	20-40	15-25	NP-5
	18-34	Very channery sandy loam, very cobbly sandy loam, extremely flaggy sandy loam	GM, GP-GM	A-1	10-15	30-50	45-60	35-50	15-30	10-25	0-10	NP
	34-38	Unweathered bedrock			---	---	---	---	---	---	---	---
154:												
Kloochman-------	0-3	Gravelly fine sandy loam	SM	A-2, A-4	0	0-10	70-85	60-75	45-65	25-40	15-25	NP-5
	3-18	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	5-15	70-85	55-75	40-65	20-40	15-25	NP-5
	18-34	Very channery sandy loam, very cobbly sandy loam, extremely flaggy sandy loam	GM, GP-GM	A-1	10-15	30-50	45-60	35-50	15-30	10-25	0-10	NP
	34-38	Unweathered bedrock			---	---	---	---	---	---	---	---
155:												
Kloochman-------	0-3	Gravelly fine sandy loam	SM	A-2, A-4	0	0-10	70-85	60-75	45-65	25-40	15-25	NP-5
	3-18	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	5-15	70-85	55-75	40-65	20-40	15-25	NP-5
	18-34	Very channery sandy loam, very cobbly sandy loam, extremely flaggy sandy loam	GM, GP-GM	A-1	10-15	30-50	45-60	35-50	15-30	10-25	0-10	NP
	34-38	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
155:												
Inkler----------	0-4	Stony fine sandy loam	SM	A-2, A-4	5-15	0-15	75-85	65-75	45-65	25-40	20-30	NP-5
	4-10	Very cobbly sandy loam, very gravelly fine sandy loam	GM, SM	A-1, A-2	0-15	0-25	50-70	30-50	20-50	10-35	20-30	NP-5
	10-29	Very stony sandy loam, very cobbly fine sandy loam	GM, GP-GM	A-1, A-2	0-30	0-25	40-60	20-50	15-40	5-30	15-25	NP-5
	29-44	Extremely cobbly sandy loam, extremely cobbly fine sandy loam	GM, GP, SM, SP	A-1	0-30	0-40	40-60	15-40	10-30	0-15	0-10	NP
	44-48	Unweathered bedrock			---	---	---	---	---	---	---	---
156:												
Kloochman-------	0-3	Flaggy fine sandy loam	SM	A-2, A-4	0	0-10	70-85	60-75	45-65	25-40	15-25	NP-5
	3-20	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	5-15	70-85	55-75	40-65	20-40	15-25	NP-5
	20-36	Very channery sandy loam, very cobbly sandy loam, extremely flaggy sandy loam	GM, GP-GM	A-1	10-15	30-50	45-60	35-50	15-30	10-25	0-10	NP
	36-40	Unweathered bedrock			---	---	---	---	---	---	---	---
Inkler----------	0-4	Stony fine sandy loam	SM	A-2, A-4	5-15	0-15	75-85	65-75	45-65	25-40	20-30	NP-5
	4-10	Very cobbly sandy loam, extremely gravelly fine sandy loam	GM, SM	A-1, A-2	0-15	0-25	50-70	30-50	20-50	10-35	20-30	NP-5
	10-29	Very stony sandy loam, very cobbly fine sandy loam	GM, GP-GM	A-1, A-2	0-30	0-25	40-60	20-50	15-40	5-30	15-25	NP-5
	29-44	Extremely cobbly sandy loam, extremely cobbly fine sandy loam	GM, GP, SM, SP	A-1	0-30	0-40	40-60	15-40	10-30	0-15	0-10	NP
	44-48	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
156:												
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
157:												
Kloochman-------	0-3	Flaggy fine sandy loam	SM	A-2, A-4	0	0-10	70-85	60-75	45-65	25-40	15-25	NP-5
	3-20	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	5-15	70-85	55-75	40-65	20-40	15-25	NP-5
	20-36	Very channery sandy loam, very cobbly sandy loam, extremely flaggy sandy loam	GM, GP-GM	A-1	10-15	30-50	45-60	35-50	15-30	10-25	0-10	NP
	36-40	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
158:												
Limking---------	0-6	Stony loam	ML	A-4	5-10	0-10	90-95	85-90	70-85	50-70	20-25	NP-5
	6-13	Gravelly loam, very gravelly loam, gravelly sandy loam	SM	A-1, A-2, A-4	5-10	5-10	70-85	45-70	40-60	20-45	20-25	NP-5
	13-22	Gravelly sandy loam, very gravelly sandy loam, very stony sandy loam	SM	A-1	5-20	10-20	55-75	40-65	25-45	10-25	15-25	NP-5
	22-44	Very gravelly loamy sand, extremely gravelly loamy sand, very cobbly loamy sand	GM, GP-GM, SM, SP-SM	A-1	5-20	10-35	50-70	25-40	15-30	5-15	0-10	NP
	44-58	Very gravelly loamy sand, extremely gravelly loamy coarse sand, extremely cobbly sand	SP, SP-SM	A-1	5-20	5-30	50-65	25-40	10-20	0-10	0-10	NP
	58-62	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
159:												
Limking---------	0-6	Stony loam	ML	A-4	5-10	0-10	90-95	85-90	70-85	50-70	20-25	NP-5
	6-13	Gravelly loam, very gravelly loam, gravelly sandy loam	SM	A-1, A-2, A-4	5-10	0-15	70-85	45-70	40-60	20-45	20-25	NP-5
	13-22	Gravelly sandy loam, very gravelly sandy loam, very stony sandy loam	SM	A-1	5-20	10-20	55-75	40-65	25-45	10-25	15-25	NP-5
	22-44	Very gravelly loamy sand, extremely gravelly loamy sand, very cobbly loamy sand	GM, GP-GM, SM, SP-SM	A-1	5-20	10-35	50-70	25-40	15-30	5-15	0-10	NP
	44-58	Very gravelly loamy sand, extremely gravelly loamy coarse sand, extremely cobbly sand	SP, SP-SM	A-1	5-20	5-30	50-65	25-40	10-20	0-10	0-10	NP
	58-62	Unweathered bedrock			---	---	---	---	---	---	---	---
Coopmont--------	0-5	Cindery fine sandy loam	ML	A-4	0	0	100	75-90	55-75	45-50	20-35	NP-5
	5-12	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0	100	60-75	45-60	20-35	20-35	NP-5
	12-28	Cindery loamy sand, cindery sandy loam	SM	A-1, A-2	0	0	100	50-70	35-55	15-30	20-35	NP-5
	28-50	Very gravelly sandy loam, very gravelly loam	GM	A-1, A-2	0-15	10-30	40-65	30-50	20-50	10-35	15-20	NP-5
	50-60	Extremely gravelly loamy sand, extremely gravelly sand	GP, GP-GM	A-1	10-25	15-50	20-45	10-35	5-25	0-10	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
160:												
Limking---------	0-6	Stony loam	ML	A-4	5-10	0-10	90-95	85-90	70-85	50-70	20-25	NP-5
	6-13	Gravelly loam, very gravelly loam, gravelly sandy loam	SM	A-1, A-2, A-4	5-10	0-15	70-85	45-70	40-60	20-45	20-25	NP-5
	13-22	Gravelly sandy loam, very gravelly sandy loam, very stony sandy loam	SM	A-1	5-20	10-20	55-75	40-65	25-45	10-25	15-25	NP-5
	22-44	Very gravelly loamy sand, extremely gravelly loamy sand, very cobbly loamy sand	GM, GP-GM, SM, SP-SM	A-1	5-20	10-35	50-70	25-40	15-30	5-15	0-10	NP
	44-58	Very gravelly loamy sand, extremely gravelly loamy coarse sand, extremely cobbly sand	SP, SP-SM	A-1	5-20	5-30	50-65	25-40	10-20	0-10	0-10	NP
	58-62	Unweathered bedrock			---	---	---	---	---	---	---	---
Coopmont--------	0-5	Cindery fine sandy loam	ML	A-4	0	0	100	75-90	55-75	45-50	20-35	NP-5
	5-12	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0	100	60-75	45-60	20-35	20-35	NP-5
	12-28	Cindery loamy sand, cindery sandy loam	SM	A-1, A-2	0	0	100	50-70	35-55	15-30	20-35	NP-5
	28-50	Very gravelly sandy loam, very gravelly loam	GM	A-1, A-2	0-15	10-30	40-65	30-50	20-50	10-35	15-20	NP-5
	50-60	Extremely gravelly loamy sand, extremely gravelly sand	GP, GP-GM	A-1	10-25	15-50	20-45	10-35	5-25	0-10	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
161:												
Limking---------	0-6	Stony loam	ML	A-4	5-10	0-10	90-95	85-90	70-85	50-70	20-25	NP-5
	6-13	Gravelly loam, very gravelly loam, gravelly sandy loam	SM	A-1, A-2, A-4	5-10	0-15	70-85	45-70	40-60	20-45	20-25	NP-5
	13-22	Gravelly sandy loam, very gravelly sandy loam, very stony sandy loam	SM	A-1	5-20	10-20	55-75	40-65	25-45	10-25	15-25	NP-5
	22-44	Very gravelly loamy sand, extremely gravelly loamy sand, very cobbly loamy sand	GM, GP-GM, SM, SP-SM	A-1	5-20	10-35	50-70	25-40	15-30	5-15	0-10	NP
	44-58	Very gravelly loamy sand, extremely gravelly loamy coarse sand, extremely cobbly sand	SP, SP-SM	A-1	5-20	5-30	50-65	25-40	10-20	0-10	0-10	NP
	58-62	Unweathered bedrock			---	---	---	---	---	---	---	---
Coopmont--------	0-5	Cindery fine sandy loam	ML	A-4	0	0	100	25-90	55-75	45-50	20-35	NP-5
	5-12	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0	100	60-75	45-60	20-35	20-35	NP-5
	12-28	Cindery loamy sand, cindery sandy loam	SM	A-1, A-2	0	0	100	50-70	35-55	15-30	20-35	NP-5
	28-50	Very gravelly sandy loam, very gravelly loam	GM	A-1, A-2	0-15	10-30	40-65	30-50	20-50	10-35	15-20	NP-5
	50-60	Extremely gravelly loamy sand, extremely gravelly sand	GP, GP-GM	A-1	10-25	15-50	20-45	10-35	5-25	0-10	0-10	NP
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
162:												
Limking---------	0-6	Stony loam	ML	A-4	5-10	0-10	90-95	85-90	70-85	50-70	20-25	NP-5
	6-13	Gravelly loam, very gravelly loam, gravelly sandy loam	SM	A-1, A-2, A-4	5-10	0-15	70-85	45-70	40-60	20-45	20-25	NP-5
	13-22	Gravelly sandy loam, very gravelly sandy loam, very stony sandy loam	SM	A-1	5-20	10-20	55-75	40-65	25-45	10-25	15-25	NP-5
	22-44	Very gravelly loamy sand, extremely gravelly loamy sand, very cobbly loamy sand	GM, GP-GM, SM, SP-SM	A-1	5-20	10-35	50-70	25-40	15-30	5-15	0-10	NP
	44-58	Very gravelly loamy sand, extremely gravelly loamy coarse sand, extremely cobbly sand	SP, SP-SM	A-1	5-20	5-30	50-65	25-40	10-20	0-10	0-10	NP
	58-62	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
163:												
Line------------	0-4	Cindery fine sandy loam	SM	A-1, A-2	0	0-5	80-95	35-50	30-45	15-30	25-35	NP-5
	4-15	Cindery sandy loam, cindery fine sandy loam, very cindery sandy loam	SM, SP-SM	A-1	0	0-5	75-90	30-60	20-35	15-25	25-35	NP-5
	15-60	Extremely cobbly coarse sand, extremely gravelly coarse sand, very gravelly loamy sand	GP, SP	A-1	0-10	10-40	40-60	30-50	10-20	0-5	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
164:												
Line------------	0-10	Gravelly fine sandy loam	SM	A-1, A-2	0	0-5	80-95	35-50	30-45	15-30	25-35	NP-5
	10-21	Gravelly sandy loam, gravelly fine sandy loam, very gravelly sandy loam	SM, SP-SM	A-1	0	0-5	75-90	30-60	20-35	15-25	25-35	NP-5
	21-60	Extremely cobbly coarse sand, extremely gravelly coarse sand, very gravelly loamy sand	GP, SP	A-1	0-10	10-40	40-60	30-50	10-20	0-5	0-10	NP
165:												
Line------------	0-8	Stony fine sandy loam	SM	A-1, A-2	5-10	5-10	70-80	40-50	30-45	15-30	30-35	NP-5
	8-22	Very cindery sandy loam, very cindery fine sandy loam	SM, SP-SM	A-1	0	0-5	70-80	30-60	20-35	15-25	25-30	NP-5
	22-60	Very gravelly coarse sand, extremely cobbly coarse sand	GP, SP	A-1	0	15-30	45-60	30-50	10-25	0-5	0-10	NP
166:												
Line------------	0-10	Gravelly fine sandy loam	SM	A-1, A-2	0	0-5	80-95	35-50	30-45	15-30	25-35	NP-5
	10-21	Gravelly sandy loam, gravelly fine sandy loam, very gravelly sandy loam	SM, SP-SM	A-1	0	0-5	75-90	30-60	20-35	15-25	25-35	NP-5
	21-60	Extremely cobbly coarse sand, extremely gravelly coarse sand, very gravelly loamy sand	GP, SP	A-1	0-10	10-40	40-60	30-50	10-20	0-5	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
166:												
Vabbing---------	0-3	Bouldery sandy loam	SM	A-1, A-2	5-10	0-5	95-100	65-75	40-50	20-30	25-30	NP-5
	3-10	Very cindery sandy loam, cindery loamy sand, cindery sandy loam	SM, SP-SM	A-1	0	0-5	95-100	30-45	15-35	5-20	25-30	NP-5
	10-26	Extremely cindery sandy loam, very cindery sandy loam, very cindery coarse sand	SM, SP-SM	A-1	0	0-5	95-100	20-40	10-30	5-15	25-30	NP-5
	26-60	Extremely stony sandy loam, very gravelly sandy loam, very stony sandy loam	GM	A-1, A-2	15-30	5-30	25-60	20-55	15-50	10-30	20-25	NP-5
167:												
Loneridge-------	0-9	Stony loam	CL-ML, ML	A-4	5-10	0-10	90-95	85-95	65-75	55-65	25-35	5-10
	9-36	Very cobbly clay, very cobbly clay loam, extremely gravelly clay	GC, GM, SC, SM	A-2, A-7	5-10	20-35	45-80	25-50	20-45	20-45	45-65	20-30
	36-60	Very gravelly clay loam, extremely gravelly clay loam, extremely cobbly clay loam	GC, SC	A-2, A-6	5-10	30-45	65-80	40-50	35-50	30-40	30-35	10-15
168:												
Loneridge-------	0-4	Stony loam	CL-ML, ML	A-4	5-10	0-10	90-95	85-95	65-75	55-65	25-35	5-10
	4-30	Very gravelly loam, very gravelly clay loam, extremely gravelly clay loam	CL-ML, GC-GM, SC-SM	A-2, A-4	0-10	5-40	60-90	50-80	40-80	30-75	25-35	5-10
	30-60	Very cobbly clay, very cobbly clay loam, extremely gravelly clay	GC, GM, SC, SM	A-2, A-7	5-10	20-45	45-80	25-50	20-45	20-45	45-65	20-30

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
169:												
Loneridge-------	0-8	Very stony loam	CL-ML, ML	A-4	10-25	0-15	90-95	85-95	65-75	55-65	25-35	5-10
	8-60	Very cobbly clay loam, extremely gravelly clay extremely cobbly clay loam	GC, GM, SC, SM	A-2, A-7	5-10	20-45	45-80	25-50	20-45	20-45	45-65	20-30
170:												
Macreeing-------	0-5	Stony fine sandy loam	SM	A-2, A-4	10-20	10-25	80-90	70-80	50-70	30-40	20-25	NP-5
	5-23	Very cobbly sandy loam, very gravelly sandy loam, very cobbly coarse sandy loam	GM, SM	A-1, A-2	0	25-45	50-80	40-65	30-50	15-30	20-25	NP-5
	23-48	Very cobbly coarse sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1	0	30-50	40-80	25-70	20-45	5-25	20-25	NP-5
	48-52	Unweathered bedrock			---	---	---	---	---	---	---	---
171:												
Macreeing-------	0-5	Stony fine sandy loam	SM	A-2, A-4	10-20	10-25	80-90	70-80	50-70	30-40	20-25	NP-5
	5-23	Very cobbly sandy loam, very gravelly sandy loam, very cobbly coarse sandy loam	GM, SM	A-1, A-2	0	25-45	50-80	40-65	30-50	15-30	20-25	NP-5
	23-48	Very cobbly coarse sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1	0	30-50	40-80	25-70	20-45	5-25	20-25	NP-5
	48-52	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
172:												
Macreeing-------	0-5	Stony fine sandy loam	SM	A-2, A-4	10-20	10-25	80-90	70-80	50-70	30-40	20-25	NP-5
	5-23	Very cobbly sandy loam, very gravelly sandy loam, very cobbly coarse sandy loam	GM, SM	A-1, A-2	0	25-45	50-80	40-65	30-50	15-30	20-25	NP-5
	23-48	Very cobbly coarse sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1	0	30-50	40-80	25-70	20-45	5-25	20-25	NP-5
	48-52	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
173:												
Mansonia--------	0-19	Fine sandy loam	SM	A-2, A-4	0	0-10	95-100	80-90	55-75	30-50	20-30	NP-5
	19-41	Cindery fine sandy loam, cindery sandy loam	SM	A-1, A-2	0	0-15	90-100	55-70	40-60	20-35	20-30	NP-5
	41-60	Very cobbly loamy sand	SM	A-1	0-2	55-65	60-70	50-60	25-45	10-20	0-10	NP
174:												
Mansonia--------	0-10	Cindery fine sandy loam	SM	A-2, A-4	0	0-5	80-90	70-80	55-70	30-45	20-25	NP-5
	10-20	Cindery sandy loam, cindery fine sandy loam	SM	A-2, A-4	0	0-5	80-90	70-80	40-70	25-50	20-25	NP-5
	20-50	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	70-80	50-60	30-40	15-35	20-25	NP-5
	50-54	Unweathered bedrock			---	---	---	---	---	---	---	---
Swakane---------	0-2	Stony sandy loam	SM	A-1, A-2	5-15	10-20	60-80	50-70	30-50	15-30	20-30	NP-5
	2-15	Very gravelly loam, very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1, A-2	0-10	10-30	35-60	25-50	15-45	10-35	20-30	NP-5
	15-19	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
175:												
Mansonia--------	0-10	Cindery fine sandy loam	SM	A-2, A-4	0	0-5	80-90	70-80	55-70	30-45	20-25	NP-5
	10-20	Cindery sandy loam, cindery fine sandy loam	SM	A-2, A-4	0	0-5	80-90	70-80	40-70	25-50	20-25	NP-5
	20-50	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	70-80	50-60	30-40	15-35	20-25	NP-5
	50-54	Unweathered bedrock			---	---	---	---	---	---	---	---
Swakane---------	0-6	Stony sandy loam	SM	A-1, A-2	5-15	10-20	60-80	50-70	30-50	15-30	20-30	NP-5
	6-11	Very gravelly loam, very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1, A-2	0-10	10-30	35-60	25-50	15-45	10-35	20-30	NP-5
	11-14	Extremely gravelly sandy loam, very gravelly sandy loam, very cobbly loam	GM	A-1, A-2	0-10	10-30	35-60	25-50	15-45	10-35	20-30	NP-5
	14-18	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
176:												
Marmont---------	0-10	Cindery fine sandy loam	SM	A-2, A-4	0	0-5	85-100	70-80	40-50	30-40	30-40	5-10
	10-22	Very cindery sandy loam, very cindery fine sandy loam	GM, SM	A-2	0	0-10	50-70	35-50	20-30	15-25	30-40	5-10
	22-60	Extremely gravelly sand, extremely gravelly coarse sand	GP	A-1	0-10	15-40	30-40	15-30	5-10	0-5	15-20	NP-5
177:												
Marmont---------	0-10	Cindery fine sandy loam	SM	A-2, A-4	0	0-5	85-100	70-80	40-50	30-40	30-40	5-10
	10-22	Very cindery sandy loam, very cindery fine sandy loam	GM, SM	A-2	0	0-10	50-70	35-50	20-30	15-25	30-40	5-10
	22-60	Extremely gravelly sand, extremely gravelly coarse sand	GP	A-1	0-10	15-40	30-40	15-30	5-10	0-5	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
178:												
Marmont	0-10	Cindery fine sandy loam	SM	A-2, A-4	0	0-5	85-100	70-80	40-50	30-40	30-40	5-10
	10-22	Very cindery sandy loam, very cindery fine sandy loam	GM, SM	A-2	0	0-10	50-70	35-50	20-30	15-25	30-40	5-10
	22-60	Extremely gravelly sand, extremely gravelly coarse sand	GP	A-1	0	15-40	30-40	15-30	5-10	0-5	15-20	NP-5
179:												
McCree	0-5	Stony fine sandy loam	SM	A-1, A-2	5-10	10-20	60-80	55-75	40-60	20-35	30-35	NP-5
	5-19	Very stony fine sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	10-25	10-20	50-75	45-60	35-50	20-30	30-35	NP-5
	19-56	Extremely stony sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1	20-60	10-30	50-90	40-75	30-45	15-25	20-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
180:												
McCree	0-5	Stony fine sandy loam	SM	A-1, A-2	5-10	10-20	60-80	55-75	40-60	20-35	30-35	NP-5
	5-19	Very stony fine sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	10-25	10-20	50-75	45-60	35-50	20-30	30-35	NP-5
	19-56	Extremely stony sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1	20-60	10-30	50-90	40-75	30-45	15-25	20-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
181:												
McCree	0-5	Stony fine sandy loam	SM	A-1, A-2	5-10	10-20	60-80	55-75	40-60	20-35	30-35	NP-5
	5-19	Very stony fine sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	10-25	10-20	50-75	45-60	35-50	20-30	30-35	NP-5
	19-56	Extremely stony sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1	20-60	10-30	50-90	40-75	30-45	15-25	20-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
182:												
McCree----------	0-5	Stony fine sandy loam	SM	A-1, A-2	5-10	10-20	60-80	55-75	40-60	20-35	30-35	NP-5
	5-19	Very stony fine sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	10-25	10-20	50-75	45-60	35-50	20-30	30-35	NP-5
	19-56	Extremely stony sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1	20-60	10-30	50-90	40-75	30-45	15-25	20-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
Palmich---------	0-4	Gravelly sandy loam	SM	A-1, A-2	0	0-10	95-100	60-75	35-55	20-35	20-30	NP-5
	4-15	Gravelly sandy loam, very gravelly sandy loam	SM	A-1, A-2	0	0-10	95-100	40-70	30-55	15-30	20-30	NP-5
	15-26	Gravelly sandy loam, gravelly fine sandy loam, very gravelly sandy loam	SM	A-1	0	0-10	90-100	30-60	20-40	15-25	20-30	NP-5
	26-44	Very gravelly sandy loam, very gravelly fine sandy loam, extremely gravelly sandy loam	SM	A-1	0	0-10	90-100	20-45	15-30	10-20	20-30	NP-5
	44-60	Very cobbly sandy loam, very gravelly sandy loam, gravelly sandy loam	GM, SM	A-1, A-2	0	10-40	55-75	30-70	20-50	15-35	20-25	NP-5
183:												
McCree----------	0-5	Stony fine sandy loam	SM	A-1, A-2	5-10	10-20	60-80	55-75	40-60	20-35	30-35	NP-5
	5-19	Very stony fine sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	10-25	10-20	50-75	45-60	35-50	20-30	30-35	NP-5
	19-56	Extremely stony sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1	20-60	10-30	50-90	40-75	30-45	15-25	20-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
183:												
Palmont---------	0-1	Cobbly fine sandy loam	SM	A-2, A-4	0-5	0-10	80-90	60-75	40-65	25-40	15-20	NP-5
	1-11	Cobbly fine sandy loam, gravelly fine sandy loam, cobbly sandy loam	GM, SM	A-1	0-10	10-20	50-70	35-55	20-35	15-25	0-10	NP
	11-60	Very gravelly sandy loam, very stony coarse sandy loam, very gravelly loamy sand	GM, SM	A-1	5-10	5-20	50-70	35-55	20-35	15-25	0-10	NP
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
184:												
McCree----------	0-5	Stony fine sandy loam	SM	A-1, A-2	5-10	10-20	60-80	55-75	40-60	20-35	30-35	NP-5
	5-19	Very stony fine sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	10-25	10-20	50-75	45-60	35-50	20-30	30-35	NP-5
	19-56	Extremely stony sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1	20-60	10-30	50-90	40-75	30-45	15-25	20-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
185:												
Mippon----------	0-10	Gravelly fine sandy loam	SM	A-1, A-2	0	0-10	65-85	55-75	40-60	20-35	15-20	NP-5
	10-18	Very cobbly sandy loam, very gravelly sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	0-10	5-30	50-70	35-55	25-45	15-30	0-10	NP
	18-60	Extremely gravelly loamy coarse sand, extremely cobbly loamy coarse sand	GP-GM, SP-SM	A-1	0-15	25-45	25-75	20-35	10-30	5-10	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
186:												
Mippon----------	0-10	Very gravelly loamy fine sand	SM	A-1	0	5-20	55-70	40-50	25-35	10-20	0-10	NP
	10-16	Very cobbly sandy loam, very gravelly sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	0-10	5-30	50-70	35-55	25-45	15-30	0-10	NP
	16-60	Extremely gravelly loamy coarse sand, extremely cobbly loamy coarse sand	GP-GM, SP-SM	A-1	0-15	25-40	25-75	20-35	10-30	5-10	0-10	NP
187:												
Mippon----------	0-6	Very bouldery loamy sand	GM, GP-GM, SM, SP-SM	A-1	25-40	5-10	50-70	40-60	20-30	5-15	0-10	NP
	6-18	Very gravelly sandy loam, very cobbly loam, very cobbly loamy sand	GM, GP-GM	A-1	0-10	0-45	40-60	35-50	15-30	5-20	0-10	NP
	18-60	Extremely cobbly loamy sand, extremely gravelly sand, very cobbly sand	GP, GP-GM, SP, SP-SM	A-1	0-15	15-55	25-75	15-45	10-40	0-10	0-10	NP
188:												
Morical---------	0-12	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	90-100	55-70	30-40	20-25	NP-5
	12-23	Sandy loam, gravelly sandy loam, loam	SM	A-2, A-4	0	0-5	95-100	70-95	45-75	25-50	20-35	NP-10
	23-37	Sandy clay loam, clay loam, gravelly sandy clay loam	SC	A-2, A-6	0	0	95-100	50-90	40-70	25-50	30-40	10-20
	37-47	Weathered bedrock			---	---	---	---	---	---	---	---
189:												
Morical---------	0-12	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	90-100	55-70	30-40	20-25	NP-5
	12-23	Sandy loam, gravelly sandy loam, loam	SM	A-2, A-4	0	0-5	95-100	70-95	45-75	25-50	20-35	NP-10
	23-37	Sandy clay loam, clay loam, gravelly sandy clay loam	SC	A-2, A-6	0	0	95-100	50-90	40-70	25-50	30-40	10-20
	37-47	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
190:												
Morical---------	0-12	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	90-100	55-70	30-40	20-25	NP-5
	12-23	Sandy loam, gravelly sandy loam, loam	SM	A-2, A-4	0	0-5	95-100	70-95	45-75	25-50	20-35	NP-10
	23-37	Sandy clay loam, clay loam, gravelly sandy clay loam	SC	A-2, A-6	0	0	95-100	50-90	40-70	25-50	30-40	10-20
	37-47	Weathered bedrock			---	---	---	---	---	---	---	---
191:												
Morical---------	0-12	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	90-100	55-70	30-40	20-25	NP-5
	12-23	Sandy loam, gravelly sandy loam, loam	SM	A-2, A-4	0	0-5	95-100	70-95	45-75	25-50	20-35	NP-10
	23-37	Sandy clay loam, clay loam, gravelly sandy clay loam	SC	A-2, A-6	0	0	95-100	50-90	40-70	25-50	30-40	10-20
	37-47	Weathered bedrock			---	---	---	---	---	---	---	---
Dragoon---------	0-10	Loam	CL-ML, ML	A-4	0	0	100	95-100	85-100	60-85	20-30	NP-10
	10-27	Loam, silt loam, clay loam	CL	A-6	0	0	100	85-100	85-100	60-80	30-40	10-20
	27-37	Weathered bedrock			---	---	---	---	---	---	---	---
192:												
Morical---------	0-12	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	90-100	55-70	30-40	20-25	NP-5
	12-23	Sandy loam, gravelly sandy loam, loam	SM	A-2, A-4	0	0-5	95-100	70-95	45-75	25-50	20-35	NP-10
	23-37	Sandy clay loam, clay loam, gravelly sandy clay loam	SC	A-2, A-6	0	0	95-100	50-90	40-70	25-50	30-40	10-20
	37-47	Weathered bedrock			---	---	---	---	---	---	---	---
Dragoon---------	0-8	Fine sandy loam	SM	A-2, A-4	0	0	100	80-90	60-70	30-40	15-20	NP-5
	8-24	Loam, silt loam, clay loam	CL	A-6	0	0	100	85-100	85-100	60-80	30-40	10-20
	24-30	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
193:												
Morical---------	0-12	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	90-100	55-70	30-40	20-25	NP-5
	12-23	Sandy loam, gravelly sandy loam, loam	SM	A-2, A-4	0	0-5	95-100	70-95	45-75	25-50	20-35	NP-10
	23-37	Sandy clay loam, clay loam, gravelly sandy clay loam	SC	A-2, A-6	0	0	95-100	50-90	40-70	25-50	30-40	10-20
	37-47	Weathered bedrock			---	---	---	---	---	---	---	---
Dragoon---------	0-8	Fine sandy loam	SM	A-2, A-4	0	0	100	80-90	60-70	30-40	15-20	NP-5
	8-24	Loam, silt loam, clay loam	CL	A-6	0	0	100	85-100	85-100	60-80	30-40	10-20
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
194:												
Morical---------	0-12	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	90-100	55-70	30-40	20-25	NP-5
	12-23	Sandy loam, gravelly sandy loam, loam	SM	A-2, A-4	0	0-5	95-100	70-95	45-75	25-50	20-35	NP-10
	23-37	Sandy clay loam, clay loam, gravelly sandy clay loam	SC	A-2, A-6	0	0	95-100	50-90	40-70	25-50	30-40	10-20
	37-47	Weathered bedrock			---	---	---	---	---	---	---	---
Dragoon---------	0-8	Fine sandy loam	SM	A-2, A-4	0	0	100	80-90	60-70	30-40	15-20	NP-5
	8-24	Loam, silt loam, clay loam	CL	A-6	0	0	100	85-100	85-100	60-80	30-40	10-20
	24-30	Weathered bedrock			---	---	---	---	---	---	---	---
195:												
Mountaineer-----	0-4	Stony sandy loam	SM	A-1, A-2	10-15	15-25	70-90	60-80	30-50	20-35	15-20	NP-5
	4-19	Very cobbly sandy loam	SM	A-1, A-2	10-15	30-55	70-90	50-65	30-45	15-30	15-20	NP-5
	19-38	Extremely stony sandy loam, very cobbly sandy loam, very flaggy sandy loam	SM	A-1	15-50	30-55	60-80	40-60	25-40	10-25	15-20	NP-5
	38-42	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
196:												
Mountaineer-----	0-4	Stony sandy loam	SM	A-1, A-2	10-15	15-25	70-90	60-80	30-50	20-35	15-20	NP-5
	4-19	Very cobbly sandy loam	SM	A-1, A-2	10-15	30-55	70-90	50-65	30-45	15-30	15-20	NP-5
	19-38	Extremely stony sandy loam, very cobbly sandy loam, very flaggy sandy loam	SM	A-1	15-50	30-55	60-80	40-60	25-40	10-25	15-20	NP-5
	38-42	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
197:												
Mountaineer-----	0-4	Stony sandy loam	SM	A-1, A-2	10-15	15-25	70-90	60-80	30-50	20-35	15-20	NP-5
	4-19	Very cobbly sandy loam	SM	A-1, A-2	10-15	30-55	70-90	50-65	30-45	15-30	15-20	NP-5
	19-38	Extremely stony sandy loam, very cobbly sandy loam, very flaggy sandy loam	SM	A-1	15-50	30-55	60-80	40-60	25-40	10-25	15-20	NP-5
	38-42	Unweathered bedrock			---	---	---	---	---	---	---	---
Tillicum--------	0-8	Fine sandy loam	SM	A-4	0	0-5	90-100	75-100	60-80	35-50	20-30	NP-5
	8-24	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0	0-10	85-95	80-95	60-75	30-45	20-30	NP-5
	24-42	Cobbly sandy loam, gravelly sandy loam, stony sandy loam	SM	A-1, A-2	0-15	10-25	70-90	60-80	40-60	20-35	0-10	NP
	42-46	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
198:												
Nahahum---------	0-3	Loam	CL-ML	A-4	0	0-5	95-100	90-100	75-95	55-75	25-30	5-10
	3-16	Loam, gravelly loam	CL-ML	A-4	0	0-10	90-100	75-90	70-80	55-70	25-30	5-10
	16-44	Gravelly clay loam, cobbly clay loam, gravelly sandy clay loam	CL	A-6	0	10-15	85-95	75-85	70-80	55-65	30-40	10-15
	44-60	Cobbly loam, cobbly clay loam, cobbly sandy clay loam	ML	A-4	0-5	25-35	80-100	75-90	65-85	50-70	30-35	5-10

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
199:												
Nahahum---------	0-3	Loam	CL-ML	A-4	0	0-5	95-100	90-100	75-95	55-75	25-30	5-10
	3-16	Loam, gravelly loam	CL-ML	A-4	0	0-10	90-100	75-90	70-80	55-70	25-30	5-10
	16-44	Gravelly clay loam, cobbly clay loam, gravelly sandy clay loam	CL	A-6	0	10-15	85-95	75-85	70-80	55-65	30-40	10-15
	44-60	Cobbly loam, cobbly clay loam, cobbly sandy clay loam	ML	A-4	0-5	25-35	80-100	75-90	65-85	50-70	30-35	5-10
Taneum----------	0-16	Loam	CL-ML	A-4	0	5-10	95-100	90-95	75-90	55-65	25-30	5-10
	16-21	Gravelly clay loam, gravelly loam	CL, SC	A-2, A-6	0	5-10	85-95	60-85	50-80	30-60	30-40	10-15
	21-47	Gravelly clay loam, clay loam, cobbly clay loam	ML, SM	A-6, A-7	0	5-25	75-100	65-95	60-75	45-65	35-45	10-15
	47-58	Extremely cobbly clay loam, very gravelly loam, cobbly loam	GM, SM	A-2, A-6, A-7	0-10	15-75	50-80	25-65	15-60	10-50	35-45	10-15
	58-62	Unweathered bedrock			---	---	---	---	---	---	---	---
200:												
Nard------------	0-7	Sandy loam	SM	A-2, A-4	0	0	95-100	85-100	50-70	25-40	20-25	NP-5
	7-27	Sandy loam, clay loam, silt loam	CL	A-6	0	0	95-100	85-100	80-95	65-85	25-35	10-20
	27-67	Clay loam, loam, silty clay loam	CL	A-6	0	0	95-100	85-100	80-100	55-85	30-40	15-25
201:												
Nard------------	0-7	Sandy loam	SM	A-2, A-4	0	0	95-100	85-100	50-70	25-40	20-25	NP-5
	7-27	Sandy loam, clay loam, silt loam	CL	A-6	0	0	95-100	85-100	80-95	65-85	25-35	10-20
	27-67	Clay loam, loam, silty clay loam	CL	A-6	0	0	95-100	85-100	80-100	55-85	30-40	15-25
202:												
Nard------------	0-7	Sandy loam	SM	A-2, A-4	0	0	95-100	85-100	50-70	25-40	20-25	NP-5
	7-27	Sandy loam, clay loam, silt loam	CL	A-6	0	0	95-100	85-100	80-95	65-85	25-35	10-20
	27-67	Clay loam, loam, silty clay loam	CL	A-6	0	0	95-100	85-100	80-100	55-85	30-40	15-25

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
202:												
Blag	0-6	Gravelly sandy loam	SM	A-2	0	0-5	80-85	60-75	35-50	25-35	0-10	NP
	6-16	Gravelly sandy loam, sandy loam	SM	A-2, A-4	0	0-5	80-100	70-90	35-50	25-40	0-10	NP
	16-20	Unweathered bedrock			---	---	---	---	---	---	---	---
203:												
Nard	0-7	Sandy loam	SM	A-2, A-4	0	0	95-100	85-100	50-70	25-40	20-25	NP-5
	7-27	Sandy loam, clay loam, silt loam	CL	A-6	0	0	95-100	85-100	80-95	65-85	25-35	10-20
	27-67	Clay loam, loam, silty clay loam	CL	A-6	0	0	95-100	85-100	80-100	55-85	30-40	15-25
Brisky	0-4	Very gravelly sandy loam	GM, SM	A-1	0-10	5-20	50-65	40-60	30-45	15-25	15-25	NP-5
	4-10	Very gravelly loam, very cobbly loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	5-45	50-70	40-55	25-45	15-35	20-25	NP-5
	10-14	Unweathered bedrock			---	---	---	---	---	---	---	---
204:												
Nardine	0-4	Loam	CL-ML, ML	A-4	0	0	100	95-100	85-95	60-75	20-30	NP-10
	4-17	Loam	CL-ML, ML	A-4	0	0	100	95-100	85-95	60-75	20-30	NP-10
	17-42	Clay loam	CL	A-6, A-7	0	0	100	90-100	80-100	65-80	35-45	15-25
	42-60	Loam, clay loam	CL-ML, ML	A-4	0	0	100	90-100	75-85	55-70	25-35	5-10
205:												
Nardmont	0-15	Loam	CL-ML, CL	A-4	0	0-5	95-100	90-100	75-95	55-70	25-35	5-10
	15-47	Loam, gravelly loam	CL	A-6	0	0-10	95-100	75-95	70-95	50-70	30-35	10-15
	47-60	Gravelly loam	SC	A-6	0	0-10	75-90	70-85	50-60	35-45	30-35	10-15
206:												
Nardmont	0-15	Loam	CL-ML, CL	A-4	0	0-5	95-100	90-100	75-95	55-70	25-35	5-10
	15-47	Loam, gravelly loam	CL	A-6	0	0-10	95-100	75-95	70-95	50-70	30-35	10-15
	47-60	Gravelly loam	SC	A-6	0	0-10	75-90	70-85	50-60	35-45	30-35	10-15
207:												
Natapoc	0-6	Stony sandy loam	SM	A-2	2-10	0-5	85-95	80-90	50-65	25-35	20-35	NP-5
	6-19	Sandy loam, stony sandy loam, gravelly sandy loam	SM	A-1, A-2	2-15	0-15	65-90	60-85	40-60	20-35	20-35	NP-5
	19-60	Very bouldery sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	20-45	15-35	55-80	50-70	30-50	15-30	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
208:												
Natapoc---------	0-6	Stony sandy loam	SM	A-2	2-10	0-5	85-95	80-90	50-65	25-35	20-35	NP-5
	6-19	Sandy loam, stony sandy loam, gravelly sandy loam	SM	A-1, A-2	2-15	0-15	65-90	60-85	40-60	20-35	20-35	NP-5
	19-60	Very bouldery sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	20-45	15-35	55-80	50-70	30-50	15-30	15-20	NP-5
209:												
Natapoc---------	0-6	Stony sandy loam	SM	A-2	2-10	0-5	85-95	80-90	50-65	25-35	20-35	NP-5
	6-19	Sandy loam, stony sandy loam, gravelly sandy loam	SM	A-1, A-2	2-15	0-15	65-90	60-85	40-60	20-35	20-35	NP-5
	19-60	Very bouldery sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	20-45	15-35	55-80	50-70	30-50	15-30	15-20	NP-5
Thow------------	0-8	Cindery fine sandy loam	SM	A-1, A-2, A-4	0	0-5	95-100	50-75	45-70	20-45	20-30	NP-5
	8-22	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	90-95	65-75	40-50	20-35	20-30	NP-5
	22-42	Cindery coarse sandy loam, cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	80-90	60-70	30-50	15-35	20-30	NP-5
	42-60	Extremely cobbly loamy sand, very gravelly coarse sandy loam, very gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM	A-1	0-15	10-40	40-65	30-55	15-25	5-15	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
210:												
Naxing----------	0-10	Very stony loam	GM, SM	A-2, A-4	10-25	30-40	60-70	40-50	35-45	25-40	25-35	NP-5
	10-29	Very cobbly loam, very cobbly sandy loam, extremely cobbly loam	GM, SM	A-1, A-2, A-4	10-15	35-50	35-75	30-50	20-45	10-40	25-35	NP-5
	29-60	Extremely gravelly loam, very cobbly sandy loam, extremely cobbly loam	GM, SM	A-1, A-2, A-4	10-25	20-55	35-75	30-60	20-55	10-40	25-35	NP-5
211:												
Naxing----------	0-10	Very stony loam	GM, SM	A-2, A-4	10-25	30-40	60-70	40-50	35-45	25-40	25-35	NP-5
	10-29	Very cobbly loam, very cobbly sandy loam, extremely cobbly loam	GM, SM	A-1, A-2, A-4	10-15	35-50	35-75	30-50	20-45	10-40	25-35	NP-5
	29-60	Extremely gravelly loam, very cobbly sandy loam, extremely cobbly loam	GM, SM	A-1, A-2, A-4	10-25	20-55	35-75	30-60	20-55	10-40	25-35	NP-5
212:												
Newbell---------	0-11	Bouldery sandy loam	SM	A-2, A-4	2-10	5-10	80-90	70-80	60-70	30-40	25-35	NP-5
	11-60	Very gravelly loam, very gravelly sandy loam, very cobbly sandy loam	GM	A-1, A-2, A-4	0-30	10-30	50-65	35-55	35-50	20-40	20-30	NP-5
213:												
Nimue-----------	0-2	Bouldery sandy loam	SM	A-2, A-4	10-15	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	2-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
214:												
Nimue-----------	0-7	Cobbly fine sandy loam	SM	A-2, A-4	0-10	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	7-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5
215:												
Nimue-----------	0-2	Bouldery sandy loam	SM	A-2, A-4	10-15	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	2-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
216:												
Nimue-----------	0-7	Cobbly fine sandy loam	SM	A-2, A-4	0-10	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	7-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
216:												
Nimue, dry------	0-2	Bouldery sandy loam	SM	A-2, A-4	10-15	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	2-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5
217:												
Nimue, dry------	0-2	Bouldery sandy loam	SM	A-2, A-4	10-15	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	2-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5
Nimue-----------	0-7	Cobbly fine sandy loam	SM	A-2, A-4	0-10	20-30	85-95	75-85	50-70	30-50	20-40	NP-5
	7-14	Very cobbly silt loam, very cobbly fine sandy loam, very cobbly loam	SM	A-2, A-4	0-10	25-45	70-90	55-75	45-65	25-50	20-40	NP-5
	14-60	Extremely stony sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-50	5-25	45-70	35-60	20-40	10-30	20-30	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
218:												
Oldbutte--------	0-17	Silt loam	CL-ML	A-4	0	0	100	95-100	85-100	65-85	20-30	5-10
	17-36	Clay loam, silty clay loam	CL	A-6	0	0	100	95-100	85-100	65-85	30-40	10-15
	36-60	Loam, clay loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	60-85	25-35	5-15

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
219:												
Oldbutte--------	0-17	Silt loam	CL-ML	A-4	0	0	100	95-100	85-100	65-85	20-30	5-10
	17-36	Clay loam, silty clay loam	CL	A-6	0	0	100	95-100	85-100	65-85	30-40	10-15
	36-60	Loam, clay loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	60-85	25-35	5-15
220:												
Palmich---------	0-4	Cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	60-75	35-55	20-35	20-30	NP-5
	4-15	Cindery sandy loam, very cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	40-70	30-55	15-30	20-30	NP-5
	15-26	Cindery sandy loam, cindery fine sandy loam, very cindery sandy loam	SM	A-1	0	0-10	90-100	30-60	20-40	15-25	20-30	NP-5
	26-44	Very cindery sandy loam, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0-10	90-100	20-45	15-30	10-20	20-30	NP-5
	44-60	Very cobbly sandy loam, very gravelly sandy loam, gravelly sandy loam	GM, SM	A-1, A-2	0	10-40	55-75	30-70	20-50	15-35	20-25	NP-5
221:												
Palmich---------	0-4	Cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	60-75	35-55	20-35	20-30	NP-5
	4-15	Cindery sandy loam, very cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	40-70	30-55	15-30	20-30	NP-5
	15-26	Cindery sandy loam, cindery fine sandy loam, very cindery sandy loam	SM	A-1	0	0-10	90-100	30-60	20-40	15-25	20-30	NP-5
	26-44	Very cindery sandy loam, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0-10	90-100	20-45	15-30	10-20	20-30	NP-5
	44-60	Very cobbly sandy loam, very gravelly sandy loam, gravelly sandy loam	GM, SM	A-1, A-2	0	10-40	55-75	30-70	20-50	15-35	20-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
222:												
Palmich---------	0-4	Cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	60-75	35-55	20-35	20-30	NP-5
	4-15	Cindery sandy loam, very cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	40-70	30-55	15-30	20-30	NP-5
	15-26	Cindery sandy loam, cindery fine sandy loam, very cindery sandy loam	SM	A-1	0	0-10	90-100	30-60	20-40	15-25	20-30	NP-5
	26-44	Very cindery sandy loam, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0-10	90-100	20-45	15-30	10-20	20-30	NP-5
	44-60	Very cobbly sandy loam, very gravelly sandy loam, gravelly sandy loam	GM, SM	A-1, A-2	0	10-40	55-75	30-70	20-50	15-35	20-25	NP-5
223:												
Palmich---------	0-4	Cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	60-75	35-55	20-35	20-30	NP-5
	4-15	Cindery sandy loam, very cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	40-70	30-55	15-30	20-30	NP-5
	15-26	Cindery sandy loam, cindery fine sandy loam, very cindery sandy loam	SM	A-1	0	0-10	90-100	30-60	20-40	15-25	20-30	NP-5
	26-44	Very cindery sandy loam, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0-10	90-100	20-45	15-30	10-20	20-30	NP-5
	44-60	Very cobbly sandy loam, very gravelly sandy loam, gravelly sandy loam	GM, SM	A-2, A-1	0	10-40	55-75	30-70	20-50	15-35	20-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
223:												
McCree----------	0-5	Stony fine sandy loam	SM	A-1, A-2	5-10	15-20	60-80	55-75	40-60	20-35	30-35	NP-5
	5-19	Very stony fine sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	10-25	10-20	50-75	45-60	35-50	20-30	30-35	NP-5
	19-56	Extremely stony sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1	20-45	15-30	50-90	40-75	30-45	15-25	20-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
224:												
Palmich---------	0-4	Cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	60-75	35-55	20-35	20-30	NP-5
	4-15	Cindery sandy loam, very cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	40-70	30-55	15-30	20-30	NP-5
	15-26	Cindery sandy loam, cindery fine sandy loam, very cindery sandy loam	SM	A-1	0	0-10	90-100	30-60	20-40	15-25	20-30	NP-5
	26-44	Very cindery sandy loam, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0-10	90-100	20-45	15-30	10-20	20-30	NP-5
	44-60	Very cobbly sandy loam, very gravelly sandy loam, gravelly sandy loam	GM, SM	A-1, A-2	0	10-40	55-75	30-70	20-50	15-35	20-25	NP-5
McCree----------	0-5	Stony fine sandy loam	SM	A-1, A-2	5-10	10-20	60-80	55-75	40-60	20-35	30-35	NP-5
	5-19	Very stony fine sandy loam, very cobbly sandy loam	GM, SM	A-1, A-2	10-25	10-20	50-75	45-60	35-50	20-30	30-35	NP-5
	19-56	Extremely stony sandy loam, very stony sandy loam, very cobbly sandy loam	GM, SM	A-1	20-60	10-30	50-90	40-75	30-45	15-25	20-25	NP-5
	56-60	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
225:												
Palmich---------	0-4	Cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	60-75	35-55	20-35	20-30	NP-5
	4-15	Cindery sandy loam, very cindery sandy loam	SM	A-1, A-2	0	0-10	95-100	40-70	30-55	15-30	20-30	NP-5
	15-26	Cindery sandy loam, cindery fine sandy loam, very cindery sandy loam	SM	A-1	0	0-10	90-100	30-60	20-40	15-25	20-30	NP-5
	26-44	Very cindery sandy loam, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0-10	90-100	20-45	15-30	10-20	20-30	NP-5
	44-60	Very cobbly sandy loam, very gravelly sandy loam, gravelly sandy loam	SM, GM	A-1, A-2	0	10-40	55-75	30-70	20-50	15-35	20-25	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
226:												
Palmont---------	0-5	Cobbly fine sandy loam	SM	A-2, A-4	0-5	0-10	80-90	60-75	40-65	25-40	15-20	NP-5
	5-11	Cobbly fine sandy loam, gravelly fine sandy loam, cobbly sandy loam	GM, SM	A-1	0-10	10-20	50-70	35-55	20-35	15-25	0-10	NP
	11-24	Very gravelly sandy loam, very stony coarse sandy loam, very gravelly loamy sand	GM, SM	A-1	5-10	5-20	50-70	35-55	20-35	15-25	0-10	NP
	24-60	Extremely cobbly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP-GM	A-1	5-10	10-40	40-50	20-35	15-20	5-10	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
227:												
Palmont---------	0-5	Cobbly fine sandy loam	SM	A-2, A-4	0-5	0-10	80-90	60-75	40-65	25-40	15-20	NP-5
	5-11	Cobbly fine sandy loam, gravelly fine sandy loam, cobbly sandy loam	GM, SM	A-1	0-10	10-20	50-70	35-55	20-35	15-25	0-10	NP
	11-24	Very gravelly sandy loam, very stony coarse sandy loam, very gravelly loamy sand	GM, SM	A-1	5-10	5-20	50-70	35-55	20-35	15-25	0-10	NP
	24-60	Extremely cobbly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP-GM	A-1	5-10	10-40	40-50	20-35	15-20	5-10	0-10	NP
228:												
Palmont---------	0-3	Very stony fine sandy loam	SM	A-2, A-4	10-15	0-10	70-85	60-75	40-65	25-40	15-20	NP-5
	3-10	Cobbly fine sandy loam, very gravelly fine sandy loam, cobbly sandy loam	GM, SM	A-1	0-10	10-20	50-70	35-55	20-35	15-25	0-10	NP
	10-25	Very gravelly sandy loam, very stony coarse sandy loam, very gravelly loamy sand	GM, SM	A-1	5-10	5-20	50-70	35-55	20-35	15-25	0-10	NP
	25-60	Extremely cobbly loamy sand, very cobbly loamy coarse sand, very gravelly loamy sand	GP-GM	A-1	5-10	10-40	40-50	20-35	15-20	5-10	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
229:												
Palmont---------	0-5	Cobbly fine sandy loam	SM	A-2, A-4	0-5	0-10	80-90	60-75	40-65	25-40	15-20	NP-5
	5-11	Cobbly fine sandy loam, gravelly fine sandy loam, cobbly sandy loam	GM, SM	A-1	0-10	10-20	50-70	35-55	20-35	15-25	0-10	NP
	11-24	Very gravelly sandy loam, very stony coarse sandy loam, very gravelly loamy sand	GM, SM	A-1	5-10	5-20	50-70	35-55	20-35	15-25	0-10	NP
	24-60	Extremely cobbly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP-GM	A-1	5-10	10-40	40-50	20-35	15-20	5-10	0-10	NP
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
230:												
Ramparter-------	0-11	Stony sandy loam	ML	A-4	5-10	5-10	95-100	95-100	80-95	50-65	20-30	NP-5
	11-20	Very cindery sandy loam, extremely cindery sandy loam, very cindery fine sandy loam	SM	A-1, A-2	0	0	95-100	40-50	25-40	15-30	20-30	NP-5
	20-60	Cinders	SP	A-1	0	0	95-100	5-10	0-5	0-5	0-10	NP
231:												
Ramparter-------	0-2	Stony sandy loam	ML	A-4	5-10	5-10	95-100	95-100	80-95	50-65	20-30	NP-5
	2-14	Very cindery sandy loam, extremely cindery sandy loam, very cindery fine sandy loam	SM	A-1, A-2	0	0	95-100	40-50	25-40	15-30	20-30	NP-5
	14-50	Cinders	SP	A-1	0	0	95-100	5-10	0-5	0-5	0-10	NP
	50-60	Gravelly loamy sand, very gravelly loamy sand, extremely gravelly loamy sand	SM	A-1, A-2	0-10	0-15	70-85	50-75	35-55	10-25	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
232:												
Ramparter-------	0-2	Stony sandy loam	ML	A-4	5-10	5-10	95-100	95-100	80-95	50-65	20-30	NP-5
	2-14	Very cindery sandy loam, extremely cindery sandy loam, very cindery fine sandy loam	SM	A-1, A-2	0	0	95-100	40-50	25-40	15-30	20-30	NP-5
	14-50	Cinders	SP	A-1	0	0	95-100	5-10	0-5	0-5	0-10	NP
	50-60	Gravelly loamy sand, very gravelly loamy sand, extremely gravelly loamy sand	SM	A-1, A-2	0-10	0-15	70-85	50-75	35-55	10-25	0-10	NP
233:												
Ramparter-------	0-2	Stony sandy loam	ML	A-4	5-10	5-10	95-100	95-100	80-95	50-65	20-30	NP-5
	2-14	Very cindery sandy loam, extremely cindery sandy loam, very cindery fine sandy loam	SM	A-1, A-2	0	0	95-100	40-50	25-40	15-30	20-30	NP-5
	14-50	Cinders	SP	A-1	0	0	95-100	5-10	0-5	0-5	0-10	NP
	50-60	Gravelly loamy sand, very gravelly loamy sand, extremely gravelly loamy sand	SM	A-1, A-2	0-10	0-15	70-85	50-75	35-55	10-25	0-10	NP
234:												
Ramparter-------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	80-95	50-75	50-65	20-30	NP-5
	6-15	Very cindery fine sandy loam, very cindery sandy loam, cindery sandy loam	SM	A-1, A-2	0	0	95-100	40-50	25-40	15-30	20-30	NP-5
	15-53	Cinders	SP	A-1, A-2	0	0	95-100	5-10	0-5	0-5	0-10	NP
	53-60	Sandy loam, gravelly sandy loam	SM	A-2, A-4	0	0	85-95	70-90	40-60	25-40	20-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
235:												
Ramparter-------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	80-95	50-75	50-65	20-30	NP-5
	6-15	Very cindery fine sandy loam, very cindery sandy loam, cindery sandy loam	SM	A-1, A-2	0	0	95-100	40-50	25-40	15-30	20-30	NP-5
	15-53	Cinders	SP	A-1, A-2	0	0	95-100	5-10	0-5	0-5	0-10	NP
	53-60	Sandy loam, gravelly sandy loam	SM	A-2, A-4	0	0	85-95	70-90	40-60	25-40	20-25	NP-5
236:												
Ramparter-------	0-11	Stony sandy loam	ML	A-4	5-10	5-10	95-100	95-100	80-95	50-65	20-30	NP-5
	11-20	Very cindery sandy loam, extremely cindery sandy loam, very cindery fine sandy loam	SM	A-1, A-2	0	0	95-100	40-50	25-40	15-30	20-30	NP-5
	20-60	Cinders	SP	A-1	0	0	95-100	5-10	0-5	0-5	0-10	NP
Wilma-----------	0-4	Stony fine sandy loam	SM	A-2, A-4	5-10	0-10	75-90	65-85	50-70	25-45	25-30	NP-5
	4-12	Gravelly sandy loam, gravelly fine sandy loam, very gravelly sandy loam	SM	A-1, A-2	0-5	0-15	60-85	45-70	30-55	15-35	25-30	NP-5
	12-24	Very gravelly fine sandy loam, very gravelly sandy loam	GM, SM	A-1	0-5	0-15	50-70	30-45	20-40	10-20	15-20	NP-5
	24-37	Very gravelly sandy loam, very gravelly loamy sand	GM, GP-GM, SM, SP-SM	A-1	0-5	0-15	50-75	30-50	20-45	5-20	15-20	NP-5
	37-41	Unweathered bedrock			---	---	---	---	---	---	---	---
237:												
Reggad----------	0-9	Extremely stony muck	GP-GM	A-1	30-60	30-70	30-50	10-20	5-15	0-10	0-10	NP
	9-60	Fragmental material	GP	A-1	30-70	30-65	30-50	10-20	0-10	0-5	0-10	NP
238:												
Reggad----------	0-9	Extremely stony muck	GP-GM	A-1	30-60	30-70	30-50	10-20	5-15	0-10	0-10	NP
	9-60	Fragmental material	GP	A-1	30-70	30-65	30-50	10-20	0-10	0-5	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
238: Serene----------	0-4	Gravelly sandy loam	SM	A-2	0	5-10	85-95	65-75	50-65	25-35	15-25	NP-5
	4-8	Gravelly sandy loam, cobbly sandy loam	SM	A-2	0-5	10-20	80-90	75-85	50-60	20-35	15-25	NP-5
	8-13	Gravelly sandy loam, cobbly sandy loam, very cobbly loamy sand	SM	A-1, A-2	0-10	10-30	55-85	45-75	25-55	10-30	15-25	NP-5
	13-24	Very cobbly loamy coarse sand, very gravelly loamy sand	SM	A-1	0-15	10-50	65-75	35-55	25-40	10-20	0-10	NP
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
239: Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
240: Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
Blewett---------	0-3	Very gravelly sandy loam	GM	A-1	0-5	10-25	35-55	35-50	15-30	10-20	0-10	NP
	3-10	Extremely gravelly sandy loam, very gravelly sandy loam, very gravelly loam	GM	A-1	0-5	15-25	30-50	20-40	15-30	10-25	0-10	NP
	10-14	Unweathered bedrock			---	---	---	---	---	---	---	---
241: Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
Borland---------	0-6	Loam	CL-ML	A-4	0	0-5	95-100	90-100	75-90	55-70	20-30	5-10
	6-11	Clay loam, loam, sandy clay loam	CL	A-6	0	0-5	95-100	90-100	80-90	50-70	30-40	10-15
	11-15	Unweathered bedrock			---	---	---	---	---	---	---	---
242: Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
242:												
Chumstick-------	0-4	Stony sandy loam	SM	A-2, A-4	5-10	5-20	70-95	65-90	40-70	25-40	15-20	NP-5
	4-14	Very stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-20	10-15	55-80	45-60	35-50	20-30	15-20	NP-5
	14-19	Extremely stony sandy loam, very cobbly sandy loam, extremely gravelly fine sandy loam	GM, SM	A-2, A-1	25-40	0-20	50-70	25-65	25-50	10-30	15-20	NP-5
	19-23	Unweathered bedrock			---	---	---	---	---	---	---	---
Icicle----------	0-8	Very bouldery sandy loam	SM	A-2	10-20	35-60	80-95	70-90	40-65	25-35	15-20	NP-5
	8-28	Extremely stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	10-30	10-50	60-90	50-80	35-60	20-40	15-20	NP-5
	28-50	Extremely stony sandy loam, very cobbly sandy loam, extremely cobbly sandy loam	SM	A-1, A-2	10-30	25-50	60-90	50-80	30-60	20-35	15-20	NP-5
	50-54	Unweathered bedrock			---	---	---	---	---	---	---	---
243:												
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
Chumstick-------	0-4	Stony sandy loam	SM	A-2, A-4	5-10	5-20	70-95	65-90	40-70	25-40	15-20	NP-5
	4-14	Very stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	10-20	10-15	55-80	45-60	35-50	20-30	15-20	NP-5
	14-19	Extremely stony sandy loam, very cobbly sandy loam, extremely gravelly fine sandy loam	GM, SM	A-2, A-1	25-40	0-20	50-70	25-65	25-50	10-30	15-20	NP-5
	19-23	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
243:												
Icicle----------	0-8	Very bouldery sandy loam	SM	A-2	10-20	35-60	80-95	70-90	40-65	25-35	15-20	NP-5
	8-28	Extremely stony sandy loam, very cobbly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	10-30	10-50	60-90	50-80	35-60	20-40	15-20	NP-5
	28-50	Extremely stony sandy loam, very cobbly sandy loam, extremely cobbly sandy loam	SM	A-1, A-2	10-30	25-50	60-90	50-80	30-60	20-35	15-20	NP-5
	50-54	Unweathered bedrock			---	---	---	---	---	---	---	---
244:												
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
Rubble land-----	0-60	Fragmental material			---	---	---	---	---	---	---	---
Glaciers, snowfields-----	0-60	Consolidated permafrost (ice rich)			---	---	---	---	---	---	---	---
245:												
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
Rubble land-----	0-60	Fragmental material			---	---	---	---	---	---	---	---
Serene----------	0-4	Gravelly sandy loam	SM	A-2	0	5-10	85-95	65-75	50-65	25-35	15-25	NP-5
	4-8	Gravelly sandy loam, cobbly sandy loam	SM	A-2	0-5	10-20	80-90	75-85	50-60	20-35	15-25	NP-5
	8-13	Gravelly sandy loam, cobbly sandy loam, very cobbly loamy sand	SM	A-1, A-2	0-10	10-30	55-85	45-75	25-55	10-30	15-25	NP-5
	13-24	Very cobbly loamy coarse sand, very gravelly loamy sand	SM	A-1	0-15	10-50	65-75	35-55	25-40	10-20	0-10	NP
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
246:												
Rubble land-----	0-60	Fragmental material			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
247:												
Safety----------	0-3	Stony sandy loam	SM	A-2, A-4	5-10	0-5	90-100	85-95	50-65	30-40	15-25	NP-5
	3-11	Sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	0-10	85-100	65-95	45-65	20-40	15-25	NP-5
	11-24	Sandy loam, gravelly coarse sandy loam, gravelly fine sandy loam	SM	A-1, A-2	0-5	0-10	75-95	65-90	40-60	20-35	15-25	NP-5
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
248:												
Safety----------	0-3	Stony sandy loam	SM	A-2, A-4	5-10	0-5	90-100	85-95	50-65	30-40	15-25	NP-5
	3-11	Sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	0-10	85-100	65-95	45-65	20-40	15-25	NP-5
	11-24	Sandy loam, gravelly coarse sandy loam, gravelly fine sandy loam	SM	A-1, A-2	0-5	0-10	75-95	65-90	40-60	20-35	15-25	NP-5
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
249:												
Safety----------	0-3	Stony sandy loam	SM	A-2, A-4	5-10	0-5	90-100	85-95	50-65	30-40	15-25	NP-5
	3-11	Sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	0-10	85-100	65-95	45-65	20-40	15-25	NP-5
	11-24	Sandy loam, gravelly coarse sandy loam, gravelly fine sandy loam	SM	A-1, A-2	0-5	0-10	75-95	65-90	40-60	20-35	15-25	NP-5
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
250:												
Safety----------	0-3	Stony sandy loam	SM	A-2, A-4	5-10	0-5	90-100	85-95	50-65	30-40	15-25	NP-5
	3-11	Sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0-5	0-10	85-100	65-95	45-65	20-40	15-25	NP-5
	11-24	Sandy loam, gravelly coarse sandy loam, gravelly fine sandy loam	SM	A-1, A-2	0-5	0-10	75-95	65-90	40-60	20-35	15-25	NP-5
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
251:												
Saska-----------	0-6	Stony sandy loam	SM	A-2	5-10	0-5	85-90	80-85	50-60	25-35	25-30	NP-5
	6-16	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	16-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	15-35	65-80	50-70	30-50	15-30	15-20	NP-5
252:												
Saska-----------	0-6	Stony sandy loam	SM	A-2	5-10	0-5	85-90	80-85	50-60	25-35	25-30	NP-5
	6-16	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	16-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	15-35	65-80	50-70	30-50	15-30	15-20	NP-5
253:												
Saska-----------	0-4	Bouldery sandy loam	SM	A-2, A-4	5-10	0-10	95-100	80-85	55-65	30-40	25-30	NP-5
	4-10	Sandy loam, fine sandy loam	SM	A-2, A-4	0	0-5	95-100	80-85	55-65	30-40	25-30	NP-5
	10-36	Gravelly sandy loam, gravelly fine sandy loam, sandy loam	SM	A-1, A-2	0	5-10	80-90	70-85	40-55	20-30	25-30	NP-5
	36-60	Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly sandy loam	SM	A-1, A-2	5-10	20-45	60-80	25-65	20-45	10-30	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
254:												
Saska-----------	0-4	Bouldery sandy loam	SM	A-2, A-4	5-10	0-10	95-100	80-85	55-65	30-40	25-30	NP-5
	4-10	Sandy loam, fine sandy loam	SM	A-2, A-4	0	0-5	95-100	80-85	55-65	30-40	25-30	NP-5
	10-36	Gravelly sandy loam, gravelly fine sandy loam, sandy loam	SM	A-1, A-2	0	5-10	80-90	70-85	40-55	20-30	25-30	NP-5
	36-60	Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly sandy loam	SM	A-1, A-2	5-10	20-45	60-80	25-65	20-45	10-30	15-20	NP-5
255:												
Saska-----------	0-9	Very bouldery sandy loam	SM	A-2	15-20	5-15	85-90	80-85	50-60	25-35	25-30	NP-5
	9-19	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	19-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	20-35	65-80	55-70	30-50	15-30	15-20	NP-5
256:												
Saska-----------	0-9	Very bouldery sandy loam	SM	A-2	15-20	5-15	85-90	80-85	50-60	25-35	25-30	NP-5
	9-19	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	19-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	20-35	65-80	55-70	30-50	15-30	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
257:												
Saska-----------	0-6	Stony sandy loam	SM	A-2	5-10	0-5	85-90	80-85	50-60	25-35	25-30	NP-5
	6-16	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	16-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	15-35	65-80	50-70	30-50	15-30	15-20	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
258:												
Saska-----------	0-6	Stony sandy loam	SM	A-2	5-10	0-5	85-90	80-85	50-60	25-35	25-30	NP-5
	6-16	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	16-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	15-35	65-80	50-70	30-50	15-30	15-20	NP-5
Saska, bouldery	0-9	Very bouldery sandy loam	SM	A-2	15-20	5-15	85-90	80-85	50-60	25-35	25-30	NP-5
	9-19	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	19-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	20-35	65-80	55-70	30-50	15-30	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
259:												
Saska, south----	0-4	Bouldery sandy loam	SM	A-2, A-4	5-10	0-10	95-100	80-85	55-65	30-40	25-30	NP-5
	4-10	Sandy loam, fine sandy loam	SM	A-2, A-4	0	0-5	95-100	80-85	55-65	30-40	25-30	NP-5
	10-36	Gravelly sandy loam, gravelly fine sandy loam, sandy loam	SM	A-1, A-2	0	5-10	80-90	70-85	40-55	20-30	25-30	NP-5
	36-60	Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly sandy loam	SM	A-1, A-2	5-10	20-45	60-80	25-65	20-45	10-30	15-20	NP-5
Saska-----------	0-9	Very bouldery sandy loam	SM	A-2	15-20	5-15	85-90	80-85	50-60	25-35	25-30	NP-5
	9-19	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	19-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	20-35	65-80	55-70	30-50	15-30	15-20	NP-5
260:												
Saska-----------	0-6	Stony sandy loam	SM	A-2	5-10	0-5	85-90	80-85	50-60	25-35	25-30	NP-5
	6-16	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	16-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	15-35	65-80	50-70	30-50	15-30	15-20	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
260:												
Saska, bouldery	0-9	Very bouldery sandy loam	SM	A-2	15-20	5-15	85-90	80-85	50-60	25-35	25-30	NP-5
	9-19	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	19-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	20-35	65-80	55-70	30-50	15-30	15-20	NP-5
261:												
Saska-----------	0-6	Stony sandy loam	SM	A-2	5-10	0-5	85-90	80-85	50-60	25-35	25-30	NP-5
	6-16	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	16-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	15-35	65-80	50-70	30-50	15-30	15-20	NP-5
Saska, bouldery	0-9	Very bouldery sandy loam	SM	A-2	15-20	5-15	85-90	80-85	50-60	25-35	25-30	NP-5
	9-19	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	19-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	20-35	65-80	55-70	30-50	15-30	15-20	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
262:												
Saska, south----	0-4	Bouldery sandy loam	SM	A-2, A-4	5-10	0-10	95-100	80-85	55-65	30-40	25-30	NP-5
	4-10	Sandy loam, fine sandy loam	SM	A-2, A-4	0	0-5	95-100	80-85	55-65	30-40	25-30	NP-5
	10-36	Gravelly sandy loam, gravelly fine sandy loam, sandy loam	SM	A-1, A-2	0	5-10	80-90	70-85	40-55	20-30	25-30	NP-5
	36-60	Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly sandy loam	SM	A-1, A-2	5-10	20-45	60-80	25-65	20-45	10-30	15-20	NP-5
Saska-----------	0-6	Stony sandy loam	SM	A-2	5-10	0-5	85-90	80-85	50-60	25-35	25-30	NP-5
	6-16	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	16-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	15-35	65-80	50-70	30-50	15-30	15-20	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
263:												
Saydab----------	0-8	Extremely stony loam	GM, SM	A-2, A-4	30-40	20-30	60-70	40-50	35-45	25-40	30-40	NP-5
	8-38	Very cobbly loam, very cobbly silt loam	GM, SM	A-4	0-15	30-45	55-80	50-75	45-65	35-50	30-40	NP-5
	38-42	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
264:												
Scotties--------	0-10	Gravelly loam	ML, SM	A-4	0	0-10	70-85	60-75	55-65	40-55	20-30	NP-5
	10-18	Gravelly loam, very gravelly loam, very gravelly sandy loam	GM, SM	A-1, A-2, A-4	0	0-10	55-80	45-75	30-60	20-50	15-20	NP-5
	18-30	Very gravelly loam, very gravelly sandy loam	GM, SM	A-1, A-2, A-4	0-5	5-20	50-80	40-55	30-50	15-40	15-20	NP-5
	30-44	Very gravelly sandy loam, extremely cobbly sandy loam, very cobbly loam	GM	A-1, A-2, A-4	0-15	20-60	50-70	30-65	25-50	10-40	15-20	NP-5
	44-48	Unweathered bedrock			---	---	---	---	---	---	---	---
265:												
Serene----------	0-4	Gravelly sandy loam	SM	A-2	0	5-10	85-95	65-75	50-65	25-35	15-25	NP-5
	4-8	Gravelly sandy loam, cobbly sandy loam	SM	A-2	0-5	10-20	80-90	75-85	50-60	20-35	15-25	NP-5
	8-13	Gravelly sandy loam, cobbly sandy loam, very cobbly loamy sand	SM	A-1, A-2	0-10	10-30	55-85	45-75	25-55	10-30	15-25	NP-5
	13-24	Very cobbly loamy coarse sand, very gravelly loamy sand	SM	A-1	0-15	10-50	65-75	35-55	25-40	10-20	0-10	NP
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
266:												
Serene----------	0-4	Gravelly sandy loam	SM	A-2	0	5-10	85-95	65-75	50-65	25-35	15-25	NP-5
	4-8	Gravelly sandy loam, cobbly sandy loam	SM	A-2	0-5	10-20	80-90	75-85	50-60	20-35	15-25	NP-5
	8-13	Gravelly sandy loam, cobbly sandy loam, very cobbly loamy sand	SM	A-1, A-2	0-10	10-30	55-85	45-75	25-55	10-30	15-25	NP-5
	13-24	Very cobbly loamy coarse sand, very gravelly loamy sand	SM	A-1	0-15	10-50	65-75	35-55	25-40	10-20	0-10	NP
	24-34	Weathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
267: Serpen----------	0-10	Very gravelly loam	GC-GM	A-2, A-4	0-5	0-15	40-60	30-55	25-50	20-40	25-30	5-10
	10-34	Very gravelly clay loam, extremely gravelly clay loam	GC	A-2	0-5	0-15	20-50	10-40	10-35	10-30	35-50	15-25
	34-48	Very gravelly clay loam, extremely gravelly clay loam	GC	A-2	0-5	0-15	15-40	10-30	10-30	10-25	35-50	15-25
	48-52	Unweathered bedrock			---	---	---	---	---	---	---	---
268: Serpen----------	0-10	Very gravelly loam	GC-GM	A-2, A-4	0-5	0-15	40-60	30-55	25-50	20-40	25-30	5-10
	10-34	Very gravelly clay loam, extremely gravelly clay loam	GC	A-2	0-5	0-15	20-50	10-40	10-35	10-30	35-50	15-25
	34-48	Very gravelly clay loam, extremely gravelly clay loam	GC	A-2	0-5	0-15	15-40	10-30	10-30	10-25	35-50	15-25
	48-52	Unweathered bedrock			---	---	---	---	---	---	---	---
269: Shadypass-------	0-3	Very cindery sandy loam	SM	A-1, A-2	0	0	95-100	25-50	15-35	10-25	0-10	NP
	3-19	Very cindery coarse sandy loam, extremely cindery sandy loam, very cindery sandy loam	SM, SP-SM	A-1	0	0	95-100	20-35	15-30	5-20	0-10	NP
	19-60	Cinders	SP	A-1	0	0	95-100	5-15	5-10	0-5	0-10	NP
270: Shamel----------	0-11	Sandy loam	SM	A-2, A-4	0	0	80-100	75-100	50-80	30-50	0-10	NP
	11-17	Fine sandy loam, loam, gravelly sandy loam	ML, SM	A-1, A-2, A-4	0	0	60-95	50-90	35-70	20-60	15-25	NP-5
	17-38	Fine sandy loam, loam, gravelly sandy loam	ML, SM	A-1, A-2, A-4	0	0-5	60-95	50-90	35-70	20-60	15-25	NP-5
	38-60	Loam, gravelly sandy loam, sandy loam, fine sandy loam	ML, SM	A-1, A-2, A-4	0	0-5	60-95	50-90	30-65	20-60	15-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
271:												
Shamel----------	0-11	Sandy loam	SM	A-2, A-4	0	0	80-100	75-100	50-80	30-50	0-10	NP
	11-17	Fine sandy loam, loam, gravelly sandy loam	ML, SM	A-1, A-2, A-4	0	0	60-95	50-90	35-70	20-60	15-25	NP-5
	17-38	Fine sandy loam, loam, gravelly sandy loam	ML, SM	A-1, A-2, A-4	0	0-5	60-95	50-90	35-70	20-60	15-25	NP-5
	38-60	Loam, gravelly sandy loam, sandy loam, fine sandy loam	ML, SM	A-1, A-2, A-4	0	0-5	60-95	50-90	30-65	20-60	15-25	NP-5
272:												
Shamel----------	0-11	Sandy loam	SM	A-2, A-4	0	0	80-100	75-100	50-80	30-50	0-10	NP
	11-17	Fine sandy loam, loam, gravelly sandy loam	ML, SM	A-1, A-2, A-4	0	0	60-95	50-90	35-70	20-60	15-25	NP-5
	17-38	Fine sandy loam, loam, gravelly sandy loam	ML, SM	A-1, A-2, A-4	0	0-5	60-95	50-90	35-70	20-60	15-25	NP-5
	38-60	Loam, gravelly sandy loam, sandy loam, fine sandy loam	ML, SM	A-1, A-2, A-4	0	0-5	60-95	50-90	30-65	20-60	15-25	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
273:												
Shaser----------	0-9	Fine sandy loam	ML, SM	A-4	0	0-5	95-100	90-95	60-90	35-70	30-40	NP-5
	9-18	Gravelly loam, very gravelly loam, fine sandy loam	GM, ML, SM	A-1, A-2, A-4	0	5-10	60-90	50-85	45-70	20-55	30-40	NP-5
	18-46	Extremely gravelly clay loam, very gravelly clay loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	10-20	40-70	30-60	25-55	15-40	35-45	15-20
	46-60	Very gravelly clay loam, extremely gravelly clay loam, very gravelly sandy clay loam	GC	A-2, A-6	0-10	15-20	45-70	35-60	25-55	15-40	30-40	10-15

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
273:												
Blewett----------	0-3	Very gravelly sandy loam	GM	A-1	0-5	10-25	35-55	35-50	15-30	10-20	0-10	NP
	3-10	Extremely gravelly sandy loam, very gravelly sandy loam, very gravelly loam	GM	A-1	0-5	15-25	30-50	20-40	15-30	10-25	0-10	NP
	10-14	Unweathered bedrock			---	---	---	---	---	---	---	---
274:												
Shaser----------	0-9	Fine sandy loam	ML, SM	A-4	0	0-5	95-100	90-95	60-90	35-70	30-40	NP-5
	9-18	Gravelly loam, very gravelly loam, fine sandy loam	GM, ML, SM	A-1, A-2, A-4	0	5-10	60-90	50-85	45-70	20-55	30-40	NP-5
	18-46	Extremely gravelly clay loam, very gravelly clay loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	10-20	40-70	30-60	25-55	15-40	35-45	15-20
	46-60	Very gravelly clay loam, extremely gravelly clay loam, very gravelly sandy clay loam	GC	A-2, A-6	0-10	15-20	45-70	35-60	25-55	15-40	30-40	10-15
Brisky----------	0-4	Very gravelly sandy loam	GM, SM	A-1	0-10	5-20	50-65	40-60	30-45	15-25	15-25	NP-5
	4-10	Very gravelly loam, very cobbly loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	5-45	50-70	40-55	25-45	15-35	20-25	NP-5
	10-14	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
275:												
Shaser----------	0-9	Fine sandy loam	ML, SM	A-4	0	0-5	95-100	90-95	60-90	35-70	30-40	NP-5
	9-18	Gravelly loam, very gravelly loam, fine sandy loam	GM, ML, SM	A-1, A-2, A-4	0	5-10	60-90	50-85	45-70	20-55	30-40	NP-5
	18-46	Extremely gravelly clay loam, very gravelly clay loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	10-20	40-70	30-60	25-55	15-40	35-45	15-20
	46-60	Very gravelly clay loam, extremely gravelly clay loam, very gravelly sandy clay loam	GC	A-2, A-6	0-10	15-20	45-70	35-60	25-55	15-40	30-40	10-15
Chapot----------	0-6	Gravelly sandy loam	SM	A-1, A-2	0	0-5	65-85	55-75	35-50	15-30	20-30	NP-5
	6-14	Gravelly loam, very gravelly loam	GM, SM	A-2, A-4	0	5-15	60-80	50-70	40-65	30-50	15-25	NP-5
	14-24	Very gravelly loam, very gravelly clay loam	GC-GM	A-2, A-4	0-10	10-15	40-65	30-55	30-55	20-45	20-30	5-10
	24-60	Very gravelly clay loam, extremely gravelly clay loam	GC	A-2, A-6	0-10	15-20	35-60	25-50	25-50	20-40	25-40	10-20
276:												
Skipeak---------	0-7	Gravelly sandy loam	SM	A-2, A-4	0	0-5	55-95	50-75	40-60	25-40	20-25	NP-5
	7-17	Very gravelly sandy loam, very gravelly loam, gravelly sandy loam	SM	A-1, A-2	0	5-10	65-80	45-60	30-40	15-35	20-25	NP-5
	17-60	Very gravelly loamy sand, very gravelly sand	SP-SM	A-1	0-5	5-15	55-75	30-45	20-35	5-10	0-10	NP
277:												
Skipeak---------	0-7	Gravelly sandy loam	SM	A-2, A-4	0	0-5	55-95	50-75	40-60	25-40	20-25	NP-5
	7-17	Very gravelly sandy loam, very gravelly loam, gravelly sandy loam	SM	A-1, A-2	0	5-10	65-80	45-60	30-40	15-35	20-25	NP-5
	17-60	Very gravelly loamy sand, very gravelly sand	SP-SM	A-1	0-5	5-15	55-75	30-45	20-35	5-10	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
277:												
Line------------	0-4	Cindery fine sandy loam	SM	A-1, A-2	0	0-5	80-95	35-50	30-45	15-30	25-35	NP-5
	4-15	Cindery sandy loam, cindery fine sandy loam, very cindery sandy loam	SM, SP-SM	A-1	0	0-5	75-90	30-60	20-35	15-25	25-35	NP-5
	15-60	Extremely cobbly coarse sand, extremely gravelly coarse sand, very gravelly loamy sand	GP, SP	A-1	0-10	10-40	40-60	30-50	10-20	0-5	0-10	NP
278:												
Soda------------	0-11	Stony sandy loam	SM	A-2, A-4	10-15	0-10	95-100	90-95	50-65	30-40	25-35	NP-5
	11-25	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	25-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5
279:												
Soda------------	0-3	Bouldery sandy loam	SM	A-2, A-4	10-15	0-10	95-100	90-95	50-65	30-40	25-35	NP-5
	3-18	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	18-28	Very cobbly sandy loam, extremely cobbly sandy loam, very gravelly fine sandy loam	SM	A-1, A-2	0-15	25-40	70-80	50-70	30-60	15-35	25-35	NP-5
	28-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
280:												
Soda------------	0-8	Very bouldery sandy loam	SM	A-2, A-4	20-25	0-5	95-100	90-95	50-65	30-40	25-35	NP-5
	8-22	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	22-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5
281:												
Soda------------	0-10	Bouldery fine sandy loam	SM	A-2, A-4	10-15	5-10	75-95	55-85	50-75	25-40	25-35	NP-5
	10-18	Gravelly fine sandy loam, sandy loam, fine sandy loam	SM	A-1, A-2, A-4	5-10	5-15	70-100	65-95	40-75	20-40	25-35	NP-5
	18-50	Very gravelly fine sandy loam, very stony sandy loam, very cobbly fine sandy loam	GM	A-1	0-20	15-25	45-60	40-55	25-45	15-25	25-35	NP-5
	50-60	Dense glacial till			---	---	---	---	---	---	---	---
282:												
Soda------------	0-10	Bouldery fine sandy loam	SM	A-2, A-4	10-15	5-10	75-95	55-85	50-75	25-40	25-35	NP-5
	10-18	Gravelly fine sandy loam, sandy loam, fine sandy loam	SM	A-1, A-2, A-4	5-10	5-15	70-100	65-95	40-75	20-40	25-35	NP-5
	18-50	Very gravelly fine sandy loam, very stony sandy loam, very cobbly fine sandy loam	GM	A-1	0-20	15-25	45-60	40-55	25-45	15-25	25-35	NP-5
	50-60	Dense glacial till			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
283:												
Soda------------	0-10	Bouldery fine sandy loam	SM	A-2, A-4	10-15	5-10	75-95	55-85	50-75	25-40	25-35	NP-5
	10-18	Gravelly fine sandy loam, sandy loam, stony fine sandy loam	SM	A-1, A-2, A-4	5-10	5-15	70-100	65-95	40-75	20-40	25-35	NP-5
	18-50	Very gravelly fine sandy loam, very stony sandy loam, very cobbly fine sandy loam	GM	A-1	0-20	15-25	45-60	40-55	25-45	15-25	25-35	NP-5
	50-60	Dense glacial till			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
284:												
Soda------------	0-8	Very bouldery sandy loam	SM	A-2, A-4	20-25	0-5	95-100	90-95	50-65	30-40	25-35	NP-5
	8-22	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	22-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
285:												
Soda------------	0-11	Stony sandy loam	SM	A-2, A-4	10-15	0-10	95-100	90-95	50-65	30-40	25-35	NP-5
	11-25	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	25-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
285:												
Soda, cold------	0-8	Very bouldery sandy loam	SM	A-2, A-4	20-25	0-5	95-100	90-95	50-65	30-40	25-35	NP-5
	8-22	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	22-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5
286:												
Soda------------	0-11	Stony sandy loam	SM	A-2, A-4	10-15	0-10	95-100	90-95	50-65	30-40	25-35	NP-5
	11-25	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	25-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5
Soda, cold------	0-8	Very bouldery sandy loam	SM	A-2, A-4	20-25	0-5	95-100	90-95	50-65	30-40	25-35	NP-5
	8-22	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	22-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5
287:												
Soda------------	0-11	Stony sandy loam	SM	A-2, A-4	10-15	0-10	95-100	90-95	50-65	30-40	25-35	NP-5
	11-25	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	25-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
287:												
Soda, cold------	0-8	Very bouldery sandy loam	SM	A-2, A-4	20-25	0-5	95-100	90-95	50-65	30-40	25-35	NP-5
	8-22	Gravelly sandy loam, gravelly fine sandy loam, cobbly sandy loam	SM	A-2, A-4	0-10	0-5	85-95	80-90	40-75	25-50	25-35	NP-5
	22-60	Very cobbly sandy loam, very cobbly loamy sand, extremely stony fine sandy loam	GM, GW-GM, SM, SW-SM	A-1	10-30	30-50	60-70	40-55	20-45	5-25	20-25	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
288:												
Sodacreek-------	0-9	Bouldery fine sandy loam	SM	A-4	10-15	0-10	90-100	85-95	60-80	35-45	20-30	NP-5
	9-20	Gravelly fine sandy loam, gravelly sandy loam	SM	A-1, A-2, A-4	0	5-10	70-80	55-75	35-60	20-40	20-30	NP-5
	20-60	Very gravelly fine sandy loam, very stony silt loam	GM, SM	A-1, A-2, A-4	10-25	10-20	50-80	40-65	35-60	20-50	20-30	NP-5
289:												
Sodacreek-------	0-9	Bouldery fine sandy loam	SM	A-4	10-15	0-10	90-100	85-95	60-80	35-45	20-30	NP-5
	9-20	Gravelly fine sandy loam, gravelly sandy loam	SM	A-4, A-1, A-2	0	5-10	70-80	55-75	35-60	20-40	20-30	NP-5
	20-60	Very gravelly fine sandy loam, very stony silt loam	GM, SM	A-1, A-2, A-4	10-25	10-20	50-80	40-65	35-60	20-50	20-30	NP-5
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
290:												
Spodic Vitrixerands---	0-7	Sandy loam	SM	A-2, A-4	0	0-5	95-100	90-95	55-70	30-40	30-40	NP-5
	7-17	Loamy sand, sandy loam	SM	A-1, A-2	0	0-5	95-100	90-95	45-70	15-30	30-40	NP-5
	17-60	Very fine sandy loam, silt loam	ML	A-4	0	0-5	95-100	95-100	80-95	60-80	15-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
290:												
Saska-----------	0-6	Stony sandy loam	SM	A-2	5-10	0-5	85-90	80-85	50-60	25-35	25-30	NP-5
	6-16	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	16-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	15-35	65-80	50-70	30-50	15-30	15-20	NP-5
291:												
Spodic Vitrixerands---	0-7	Sandy loam	SM	A-2, A-4	0	0-5	95-100	90-95	55-70	30-40	30-40	NP-5
	7-17	Loamy sand, sandy loam	SM	A-1, A-2	0	0-5	95-100	90-95	45-70	15-30	30-40	NP-5
	17-60	Very fine sandy loam, silt loam	ML	A-4	0	0-5	95-100	95-100	80-95	60-80	15-25	NP-5
Saska-----------	0-6	Stony sandy loam	SM	A-2	5-10	0-5	85-90	80-85	50-60	25-35	25-30	NP-5
	6-16	Sandy loam, gravelly sandy loam, loamy sand	SM	A-1, A-2, A-4	0-5	5-10	80-100	75-95	40-70	10-40	25-30	NP-5
	16-60	Very stony sandy loam, very cobbly sandy loam, extremely stony sandy loam	SM	A-1, A-2	20-40	15-35	65-80	50-70	30-50	15-30	15-20	NP-5
292:												
Stemilt---------	0-10	Stony loam	CL-ML, ML, SC-SM, SM	A-4	5-10	0-10	75-85	70-80	60-75	40-60	20-30	NP-10
	10-18	Cobbly loam, very cobbly loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0-10	20-30	80-90	70-80	65-80	45-65	25-35	5-15
	18-60	Very cobbly clay loam, extremely cobbly clay loam	CL, GC	A-6, A-7	5-15	45-60	65-75	60-70	55-70	40-55	35-45	15-20
293:												
Stemilt---------	0-10	Stony loam	CL-ML, ML, SC-SM, SM	A-4	5-10	0-10	75-85	70-80	60-75	40-60	20-30	NP-10
	10-18	Cobbly loam, very cobbly loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0-10	20-30	80-90	70-80	65-80	45-65	25-35	5-15
	18-60	Very cobbly clay loam, extremely cobbly clay loam	CL, GC	A-6, A-7	5-15	45-60	65-75	60-70	55-70	40-55	35-45	15-20

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
294:												
Surgh-----------	0-3	Fine sandy loam	SM	A-2, A-4	0	0-10	85-95	80-95	55-75	30-45	25-30	NP-5
	3-13	Gravelly fine sandy loam, fine sandy loam	SM	A-1, A-2, A-4	0	0-15	65-95	55-90	30-50	20-40	25-30	NP-5
	13-21	Very gravelly sandy loam, very gravelly fine sandy loam, extremely gravelly sandy loam	GM	A-1	0-5	5-15	35-50	25-45	15-30	10-25	0-10	NP
	21-46	Extremely gravelly sandy loam, very gravelly sandy loam, extremely gravelly coarse sandy loam	GM	A-1	0-10	5-25	35-50	20-40	15-30	10-20	0-10	NP
	46-50	Unweathered bedrock			---	---	---	---	---	---	---	---
295:												
Surgh-----------	0-3	Fine sandy loam	SM	A-2, A-4	0	0-10	85-95	80-95	55-75	30-45	25-30	NP-5
	3-13	Gravelly fine sandy loam, fine sandy loam	SM	A-1, A-2, A-4	0	0-15	65-95	55-90	30-50	20-40	25-30	NP-5
	13-21	Very gravelly sandy loam, very gravelly fine sandy loam, extremely gravelly sandy loam	GM	A-1	0-5	5-15	35-50	25-45	15-30	10-25	0-10	NP
	21-46	Extremely gravelly sandy loam, very gravelly sandy loam, extremely gravelly coarse sandy loam	GM	A-1	0-10	5-25	35-50	20-40	15-30	10-20	0-10	NP
	46-50	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
296:												
Surgh-----------	0-3	Fine sandy loam	SM	A-2, A-4	0	0-10	85-95	80-95	55-75	30-45	25-30	NP-5
	3-13	Gravelly fine sandy loam, fine sandy loam	SM	A-1, A-2, A-4	0	0-15	65-95	55-90	30-50	20-40	25-30	NP-5
	13-21	Very gravelly sandy loam, very gravelly fine sandy loam, extremely gravelly sandy loam	GM	A-1	0-5	5-15	35-50	25-45	15-30	10-25	0-10	NP
	21-46	Extremely gravelly sandy loam, very gravelly sandy loam, extremely gravelly coarse sandy loam	GM	A-1	0-10	5-25	35-50	20-40	15-30	10-20	0-10	NP
	46-50	Unweathered bedrock			---	---	---	---	---	---	---	---
297:												
Surgh-----------	0-12	Very bouldery fine sandy loam	GM, SM	A-1, A-2	15-25	15-25	60-85	40-65	30-55	15-35	25-30	NP-5
	12-41	Very cobbly sandy loam, very stony fine sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	15-25	20-30	50-80	40-70	25-60	15-35	0-10	NP
	41-60	Extremely gravelly coarse sandy loam, very stony sandy loam	GM, SM	A-1	15-25	20-40	35-70	25-60	15-40	10-25	0-10	NP
Wedge-----------	0-5	Cindery sandy loam	SM	A-1, A-2	0	0	80-90	60-75	40-60	20-30	25-30	NP-5
	5-11	Very cindery fine sandy loam, cindery sandy loam	SM	A-1	0	0	65-80	35-50	25-50	10-25	25-30	NP-5
	11-31	Very cindery sandy loam, extremely cindery sandy loam, extremely cindery loamy sand	SM	A-1	0	0	100	25-35	15-25	10-15	25-30	NP-5
	31-60	Cinders	SP	A-1	0	0	95-100	15-40	10-30	0-5	25-30	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
298:												
Swakane---------	0-2	Stony sandy loam	SM	A-1, A-2	5-15	10-20	60-80	50-70	30-50	15-30	20-30	NP-5
	2-15	Very gravelly loam, very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1, A-2	0-10	10-30	35-60	25-50	15-45	10-35	20-30	NP-5
	15-19	Unweathered bedrock			---	---	---	---	---	---	---	---
299:												
Swakane---------	0-2	Stony sandy loam	SM	A-1, A-2	5-15	10-20	60-80	50-70	30-50	15-30	20-30	NP-5
	2-15	Very gravelly loam, very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-2, A-1	0-10	10-30	35-60	25-50	15-45	10-35	20-30	NP-5
	15-19	Unweathered bedrock			---	---	---	---	---	---	---	---
300:												
Swakane---------	0-5	Stony sandy loam	SM	A-1, A-2	5-15	10-20	60-80	50-70	30-50	15-30	20-30	NP-5
	5-16	Extremely gravelly sandy loam, very gravelly sandy loam, very cobbly loam	GM	A-1, A-2	0-10	10-30	35-60	25-50	15-45	10-35	20-30	NP-5
	16-20	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
301:												
Swakane---------	0-2	Stony sandy loam	SM	A-1, A-2	5-15	10-20	60-80	50-70	30-50	15-30	20-30	NP-5
	2-15	Very gravelly loam, very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1, A-2	0-10	10-30	35-60	25-50	15-45	10-35	20-30	NP-5
	15-19	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
302:												
Switchback------	0-10	Gravelly fine sandy loam	SM	A-2, A-4	0	5-15	85-90	60-75	40-60	25-40	20-25	NP-5
	10-20	Gravelly fine sandy loam, gravelly loam, loam	ML, SM	A-2, A-4	0	5-15	80-95	60-90	40-80	25-60	20-25	NP-5
	20-26	Gravelly sandy loam, gravelly loam, gravelly coarse sandy loam	SM	A-1, A-2, A-4	0	5-15	60-80	55-70	35-65	20-50	20-25	NP-5
	26-36	Weathered bedrock			---	---	---	---	---	---	---	---
303:												
Switchback------	0-10	Gravelly fine sandy loam	SM	A-2, A-4	0	5-15	85-90	60-75	40-60	25-40	20-25	NP-5
	10-20	Gravelly fine sandy loam, gravelly loam, loam	ML, SM	A-2, A-4	0	5-15	80-95	60-90	40-80	25-60	20-25	NP-5
	20-26	Gravelly sandy loam, gravelly loam, gravelly coarse sandy loam	SM	A-1, A-2, A-4	0	5-15	60-80	55-70	35-65	20-50	20-25	NP-5
	26-36	Weathered bedrock			---	---	---	---	---	---	---	---
304:												
Switchback------	0-10	Gravelly fine sandy loam	SM	A-2, A-4	0	5-15	85-90	60-75	40-60	25-40	20-25	NP-5
	10-20	Gravelly fine sandy loam, gravelly loam, loam	ML, SM	A-2, A-4	0	5-15	80-95	60-90	40-80	25-60	20-25	NP-5
	20-26	Gravelly sandy loam, gravelly loam, gravelly coarse sandy loam	SM	A-1, A-2, A-4	0	5-15	60-80	55-70	35-65	20-50	20-25	NP-5
	26-36	Weathered bedrock			---	---	---	---	---	---	---	---
305:												
Taneum----------	0-16	Loam	CL-ML	A-4	0	5-10	95-100	90-95	75-90	55-65	25-30	5-10
	16-21	Gravelly clay loam, gravelly loam	CL, SC	A-2, A-6	0	5-10	85-95	60-85	50-80	30-60	30-40	10-15
	21-47	Gravelly clay loam, clay loam, cobbly clay loam	ML, SM	A-6, A-7	0	5-25	75-100	65-95	60-75	45-65	35-45	10-15
	47-58	Extremely cobbly clay loam, very gravelly loam, cobbly loam	GM, SM	A-2, A-6, A-7	0-10	15-75	50-80	25-65	15-60	10-50	35-45	10-15
	58-62	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
306:												
Thow	0-8	Cindery fine sandy loam	SM	A-1, A-2, A-4	0	0-5	95-100	50-75	45-70	20-45	20-30	NP-5
	8-22	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	90-95	65-75	40-50	20-35	20-30	NP-5
	22-42	Cindery coarse sandy loam, cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	80-90	60-70	30-50	15-35	20-30	NP-5
	42-60	Extremely cobbly loamy sand, very gravelly coarse sandy loam, very gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM	A-1	0-15	10-40	40-65	30-55	15-25	5-15	0-10	NP
307:												
Thow	0-8	Cindery fine sandy loam	SM	A-1, A-2, A-4	0	0-5	95-100	50-75	45-70	20-45	20-30	NP-5
	8-22	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	90-95	65-75	40-50	20-35	20-30	NP-5
	22-42	Cindery coarse sandy loam, cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	80-90	60-70	30-50	15-35	20-30	NP-5
	42-60	Extremely cobbly loamy sand, very gravelly coarse sandy loam, very gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM	A-1	0-15	10-40	40-65	30-55	15-25	5-15	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
308:												
Thow------------	0-8	Cindery fine sandy loam	SM	A-1, A-2, A-4	0	0-5	95-100	50-75	45-70	20-45	20-30	NP-5
	8-22	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	90-95	65-75	40-50	20-35	20-30	NP-5
	22-42	Cindery coarse sandy loam, cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	80-90	60-70	30-50	15-35	20-30	NP-5
	42-60	Extremely cobbly loamy sand, very gravelly coarse sandy loam, very gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM	A-1	0-15	10-40	40-65	30-55	15-25	5-15	0-10	NP
309:												
Thow------------	0-8	Cindery fine sandy loam	SM	A-1, A-2, A-4	0	0-5	95-100	50-75	45-70	20-45	20-30	NP-5
	8-22	Cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	90-95	65-75	40-50	20-35	20-30	NP-5
	22-42	Cindery coarse sandy loam, cindery sandy loam, cindery fine sandy loam	SM	A-1, A-2	0	0-5	80-90	60-70	30-50	15-35	20-30	NP-5
	42-60	Extremely cobbly loamy sand, very gravelly coarse sandy loam, very gravelly loamy coarse sand	GM, GP-GM, SM, SP-SM	A-1	0-15	10-40	40-65	30-55	15-25	5-15	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
309:												
Domkey----------	0-3	Sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	40-65	25-40	30-40	NP-5
	3-10	Sandy loam, fine sandy loam	SM	A-4, A-2	0	0-5	90-100	80-90	40-65	25-40	30-40	NP-5
	10-18	Gravelly sandy loam, fine sandy loam	SM	A-1, A-2	0	0-10	80-90	65-85	45-60	20-35	30-40	NP-5
	18-35	Gravelly coarse sandy loam, gravelly sandy loam	SM	A-1, A-2	0	0-15	85-95	65-75	40-60	20-35	30-40	NP-5
	35-45	Very gravelly loamy coarse sand, gravelly loamy coarse sand	SP-SM	A-1	0-5	0-15	65-75	45-65	20-35	5-10	0-10	NP
	45-55	Weathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
310:												
Thowson---------	0-14	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	75-85	50-70	30-40	30-40	NP-5
	14-34	Cindery fine sandy loam, fine sandy loam, sandy loam	SM	A-2	0	0-5	95-100	60-85	45-65	25-35	30-40	NP-5
	34-45	Very cindery fine sandy loam, very cindery sandy loam, cindery fine sandy loam	SM	A-1	0	0-5	95-100	40-70	25-40	15-25	30-40	NP-5
	45-60	Very cobbly loamy sand, very gravelly sandy loam, extremely gravelly loamy sand	SM, SP-SM	A-1	0-10	20-30	55-75	20-50	20-45	5-20	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
311:												
Thowson---------	0-14	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	75-85	50-70	30-40	30-40	NP-5
	14-34	Cindery fine sandy loam, fine sandy loam, sandy loam	SM	A-2	0	0-5	95-100	60-85	45-65	25-35	30-40	NP-5
	34-45	Very cindery fine sandy loam, very cindery sandy loam, cindery fine sandy loam	SM	A-1	0	0-5	95-100	40-70	25-40	15-25	30-40	NP-5
	45-60	Very cobbly loamy sand, very gravelly sandy loam, extremely gravelly loamy sand	SM, SP-SM	A-1	0-10	20-30	55-75	20-50	20-45	5-20	0-10	NP
312:												
Thowson---------	0-14	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	75-85	50-70	30-40	30-40	NP-5
	14-34	Cindery fine sandy loam, fine sandy loam, sandy loam	SM	A-2	0	0-5	95-100	60-85	45-65	25-35	30-40	NP-5
	34-45	Very cindery fine sandy loam, very cindery sandy loam, cindery fine sandy loam	SM	A-1	0	0-5	95-100	40-70	25-40	15-25	30-40	NP-5
	45-60	Very cobbly loamy sand, very gravelly sandy loam, extremely gravelly loamy sand	SM, SP-SM	A-1	0-10	20-30	55-75	20-50	20-45	5-20	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
313:												
Thowson---------	0-14	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	75-85	50-70	30-40	30-40	NP-5
	14-34	Cindery fine sandy loam, fine sandy loam, sandy loam	SM	A-2	0	0-5	95-100	60-85	45-65	25-35	30-40	NP-5
	34-45	Very cindery fine sandy loam, very cindery sandy loam, cindery fine sandy loam	SM	A-1	0	0-5	95-100	40-70	25-40	15-25	30-40	NP-5
	45-60	Very cobbly loamy sand, very gravelly sandy loam, extremely gravelly loamy sand	SM, SP-SM	A-1	0-10	20-30	55-75	20-50	20-45	5-20	0-10	NP
314:												
Thowson---------	0-7	Stony fine sandy loam	SM	A-2, A-4	10-15	0-5	90-95	80-90	55-75	30-40	30-40	NP-5
	7-42	Fine sandy loam, cindery fine sandy loam	SM	A-2, A-4	0-5	0-10	80-95	70-85	50-70	30-40	30-40	NP-5
	42-60	Very stony fine sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	SM	A-1, A-2	10-20	15-25	55-80	25-75	25-55	10-20	0-10	NP
315:												
Thowson---------	0-7	Stony fine sandy loam	SM	A-2, A-4	10-15	0-5	90-95	80-90	55-75	30-40	30-40	NP-5
	7-42	Fine sandy loam, cindery fine sandy loam	SM	A-4, A-2	0-5	0-10	80-95	70-85	50-70	30-40	30-40	NP-5
	42-60	Very stony fine sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	SM	A-1, A-2	10-20	15-25	55-80	25-75	25-55	10-20	0-10	NP
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
316:												
Thowson---------	0-7	Stony fine sandy loam	SM	A-2, A-4	10-15	0-5	90-95	80-90	55-75	30-40	30-40	NP-5
	7-42	Fine sandy loam, cindery fine sandy loam	SM	A-2, A-4	0-5	0-10	80-95	70-85	50-70	30-40	30-40	NP-5
	42-60	Very stony fine sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	SM	A-1, A-2	10-20	15-25	55-80	25-75	25-55	10-20	0-10	NP
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
317:												
Thowson---------	0-7	Stony fine sandy loam	SM	A-2, A-4	10-15	0-5	90-95	80-90	55-75	30-40	30-40	NP-5
	7-42	Fine sandy loam, cindery fine sandy loam	SM	A-2, A-4	0-5	0-10	80-95	70-85	50-70	30-40	30-40	NP-5
	42-60	Very stony fine sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	SM	A-1, A-2	10-20	15-25	55-80	25-75	25-55	10-20	0-10	NP
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
318:												
Thowson, stony--	0-7	Stony fine sandy loam	SM	A-2, A-4	10-15	0-5	90-95	80-90	55-75	30-40	30-40	NP-5
	7-42	Fine sandy loam, cindery fine sandy loam	SM	A-2, A-4	0-5	0-10	80-95	70-85	50-70	30-40	30-40	NP-5
	42-60	Very stony fine sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	SM	A-1, A-2	10-20	15-25	55-80	25-75	25-55	10-20	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
318:												
Thowson---------	0-14	Fine sandy loam	SM	A-2, A-4	0	0-5	95-100	75-85	50-70	30-40	30-40	NP-5
	14-34	Cindery fine sandy loam, fine sandy loam, sandy loam	SM	A-2	0	0-5	95-100	60-85	45-65	25-35	30-40	NP-5
	34-45	Very cindery fine sandy loam, very cindery sandy loam, cindery fine sandy loam	SM	A-1	0	0-5	95-100	40-70	25-40	15-25	30-40	NP-5
	45-60	Very cobbly loamy sand, very gravelly sandy loam, extremely gravelly loamy sand	SM, SP-SM	A-1	0-10	20-30	55-75	20-50	20-45	5-20	0-10	NP
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
319:												
Tillicum--------	0-5	Sandy loam	SM	A-2	0	0-5	90-100	75-100	50-60	20-30	20-30	NP-5
	5-22	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0	0-10	85-95	80-95	60-75	30-45	20-30	NP-5
	22-40	Cobbly sandy loam, gravelly sandy loam, stony sandy loam	SM	A-1, A-2	0-15	10-25	70-90	60-80	40-60	20-35	0-10	NP
	40-44	Unweathered bedrock			---	---	---	---	---	---	---	---
320:												
Tillicum--------	0-8	Fine sandy loam	SM	A-4	0	0-5	90-100	75-100	60-80	35-50	20-30	NP-5
	8-24	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0	0-10	85-95	80-95	60-75	30-45	20-30	NP-5
	24-42	Cobbly sandy loam, gravelly sandy loam, stony sandy loam	SM	A-1, A-2	0-15	10-25	70-90	60-80	40-60	20-35	0-10	NP
	42-46	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
321:												
Tillicum--------	0-8	Fine sandy loam	SM	A-4	0	0-5	90-100	75-100	60-80	35-50	20-30	NP-5
	8-24	Fine sandy loam, sandy loam, gravelly sandy loam	SM	A-2, A-4	0	0-10	85-95	80-95	60-75	30-45	20-30	NP-5
	24-42	Cobbly sandy loam, gravelly sandy loam, stony sandy loam	SM	A-1, A-2	0-15	10-25	70-90	60-80	40-60	20-35	0-10	NP
	42-46	Unweathered bedrock			---	---	---	---	---	---	---	---
322:												
Tillmont--------	0-6	Cindery sandy loam	SM	A-1, A-2	0	0	95-100	50-75	35-50	20-35	20-30	NP-5
	6-20	Cindery sandy loam, very cindery sandy loam	SM, SP-SM	A-1, A-2	0	0-5	95-100	30-70	15-45	5-30	20-25	NP-5
	20-34	Cinders	SP	A-1	0	0	95-100	5-30	5-20	0-5	0-10	NP
	34-38	Very cindery loamy coarse sand, cindery coarse sand, cindery loamy coarse sand	SM, SP-SM	A-1	0	0	85-95	30-70	15-50	5-20	0-10	NP
	38-46	Extremely cobbly very fine sandy loam, very cobbly sandy loam, extremely cobbly sandy loam	GM, SM	A-1, A-2	5-30	35-70	25-70	15-60	15-45	10-30	20-25	NP-5
	46-50	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
323:												
Tillmont--------	0-6	Cindery sandy loam	SM	A-1, A-2	0	0	95-100	50-75	35-50	20-35	20-30	NP-5
	6-20	Cindery sandy loam, very cindery sandy loam	SM, SP-SM	A-1, A-2	0	0-5	95-100	30-70	15-45	5-30	20-25	NP-5
	20-34	Cinders	SP	A-1	0	0	95-100	5-30	5-20	0-5	0-10	NP
	34-38	Very cindery loamy coarse sand, cindery coarse sand, cindery loamy coarse sand	SM, SP-SM	A-1	0	0	85-95	30-70	15-50	5-20	0-10	NP
	38-46	Extremely cobbly very fine sandy loam, very cobbly sandy loam, extremely cobbly sandy loam	GM, SM	A-1, A-2	5-30	25-70	50-70	15-60	15-45	10-30	20-25	NP-5
	46-50	Unweathered bedrock			---	---	---	---	---	---	---	---
324:												
Tillmont--------	0-6	Cindery sandy loam	SM	A-1, A-2	0	0	95-100	50-75	35-50	20-35	20-30	NP-5
	6-20	Cindery sandy loam, very cindery sandy loam	SM, SP-SM	A-1, A-2	0	0-5	95-100	30-70	15-45	5-30	20-25	NP-5
	20-34	Cinders	SP	A-1	0	0	95-100	5-30	5-20	0-5	0-10	NP
	34-38	Very cindery loamy coarse sand, cindery coarse sand, cindery loamy coarse sand	SM, SP-SM	A-1	0	0	85-95	30-70	15-50	5-20	0-10	NP
	38-46	Extremely cobbly very fine sandy loam, very cobbly sandy loam, extremely cobbly sandy loam	GM, SM	A-1, A-2	5-30	35-70	25-70	15-60	15-45	10-30	20-25	NP-5
	46-50	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
324:												
Inkler----------	0-4	Stony fine sandy loam	SM	A-2, A-4	5-15	0-15	75-85	65-75	45-65	25-40	20-30	NP-5
	4-10	Very cobbly sandy loam, very gravelly fine sandy loam	GM, SM	A-1, A-2	0-15	0-25	50-70	30-50	20-50	10-35	20-30	NP-5
	10-29	Very stony sandy loam, very cobbly fine sandy loam	GM, GP-GM	A-1, A-2	0-30	0-25	40-60	20-50	15-40	5-30	15-25	NP-5
	29-44	Extremely cobbly sandy loam, extremely cobbly fine sandy loam	GM, GP, SM, SP	A-1	0-30	0-40	40-60	15-40	10-30	0-15	0-10	NP
	44-48	Unweathered bedrock			---	---	---	---	---	---	---	---
325:												
Tiptop----------	0-2	Very gravelly loam	GM, SM	A-2	0-5	5-15	60-70	40-55	35-45	25-35	35-45	NP-5
	2-28	Extremely gravelly loam, very gravelly sandy loam, extremely gravelly fine sandy loam	GM, GP-GM	A-1	0-10	15-35	45-55	25-35	15-30	5-20	30-40	NP-5
	28-60	Extremely gravelly sandy loam, extremely gravelly fine sandy loam, extremely cobbly sandy loam	GP-GM	A-1	0-10	15-45	30-40	10-20	5-15	5-10	15-25	NP-5
326:												
Tiptop----------	0-2	Very gravelly loam	GM, SM	A-2	0-5	5-15	60-70	40-55	35-45	25-35	35-45	NP-5
	2-28	Extremely gravelly loam, very gravelly sandy loam, extremely gravelly fine sandy loam	GM, GP-GM	A-1	0-10	15-35	45-55	25-35	15-30	5-20	30-40	NP-5
	28-60	Extremely gravelly sandy loam, extremely gravelly fine sandy loam, extremely cobbly sandy loam	GP-GM	A-1	0-10	15-45	30-40	10-20	5-15	5-10	15-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
326: Naxing----------	0-10	Very stony loam	GM, SM	A-2, A-4	10-25	30-40	60-70	40-50	35-45	25-40	25-35	NP-5
	10-29	Very cobbly loam, very cobbly sandy loam, extremely cobbly loam	GM, SM	A-1, A-2, A-4	10-15	35-50	35-75	30-50	20-45	10-40	25-35	NP-5
	29-60	Extremely gravelly loam, very cobbly sandy loam, extremely cobbly loam	GM, SM	A-1, A-2, A-4	10-25	20-55	35-75	30-60	20-55	10-40	25-35	NP-5
327: Totem-----------	0-6	Sandy loam	SM	A-2, A-4	0	0	95-100	90-100	55-70	25-40	25-35	NP-5
	6-25	Sandy loam, cindery loam, cindery sandy loam	ML, SM	A-2, A-4	0	0	95-100	70-90	50-75	25-55	25-35	NP-5
	25-33	Very cindery sandy loam, extremely cindery sandy loam	SM, SP-SM	A-1	0	0	95-100	20-50	10-35	5-25	0-10	NP
	33-60	Cinders	SP	A-1	0	0	95-100	5-30	5-20	0-5	0-10	NP
328: Totem-----------	0-6	Sandy loam	SM	A-2, A-4	0	0	95-100	90-100	55-70	25-40	25-35	NP-5
	6-25	Sandy loam, cindery loam, cindery sandy loam	ML, SM	A-2, A-4	0	0	95-100	70-90	50-75	25-55	25-35	NP-5
	25-33	Very cindery sandy loam, extremely cindery sandy loam	SM, SP-SM	A-1	0	0	95-100	20-50	10-35	5-25	0-10	NP
	33-60	Cinders	SP	A-1	0	0	95-100	5-30	5-20	0-5	0-10	NP
329: Totem-----------	0-6	Sandy loam	SM	A-2, A-4	0	0	95-100	90-100	55-70	25-40	25-35	NP-5
	6-25	Sandy loam, cindery loam, cindery sandy loam	ML, SM	A-2, A-4	0	0	95-100	70-90	50-75	25-55	25-35	NP-5
	25-33	Very cindery sandy loam, extremely cindery sandy loam	SM, SP-SM	A-1	0	0	95-100	20-50	10-35	5-25	0-10	NP
	33-60	Cinders	SP	A-1	0	0	95-100	5-30	5-20	0-5	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
330:												
Totem-----------	0-6	Sandy loam	SM	A-2, A-4	0	0	95-100	90-100	55-70	25-40	25-35	NP-5
	6-25	Sandy loam, cindery loam, cindery sandy loam	ML, SM	A-2, A-4	0	0	95-100	70-90	50-75	25-55	25-35	NP-5
	25-33	Very cindery sandy loam, extremely cindery sandy loam	SM, SP-SM	A-1	0	0	95-100	20-50	10-35	5-25	0-10	NP
	33-60	Cinders	SP	A-1	0	0	95-100	5-30	5-20	0-5	0-10	NP
Chiwaukum-------	0-5	Bouldery fine sandy loam	SM	A-4	5-20	0-10	95-100	90-95	65-75	35-45	30-40	NP-5
	5-17	Gravelly fine sandy loam, gravelly sandy loam, stony fine sandy loam	SM	A-1, A-2	0-10	5-10	70-90	65-85	45-70	20-35	30-40	NP-5
	17-26	Gravelly fine sandy loam, cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-5	5-20	75-95	70-90	40-65	20-30	30-40	NP-5
	26-60	Very cobbly sandy loam, extremely stony coarse sandy loam, very cobbly loamy sand	GM, SM	A-1, A-2	10-30	25-55	45-65	40-60	25-45	15-30	15-25	NP-5
331:												
Treen-----------	0-11	Fine sandy loam	SM	A-4	0	0-10	95-100	90-100	65-80	40-50	30-35	NP-5
	11-16	Gravelly sandy loam, loam, gravelly fine sandy loam	SM	A-1, A-2	0	0-10	70-90	55-80	40-55	20-30	15-20	NP-5
	16-20	Unweathered bedrock			---	---	---	---	---	---	---	---
332:												
Treen-----------	0-11	Fine sandy loam	SM	A-4	0	0-10	95-100	90-100	65-80	40-50	30-35	NP-5
	11-16	Gravelly sandy loam, loam, gravelly fine sandy loam	SM	A-1, A-2	0	0-10	70-90	55-80	40-55	20-30	15-20	NP-5
	16-20	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
332: Klapatche-------	0-4	Very stony loamy sand	SM	A-1, A-2	25-45	0-20	95-100	85-95	45-70	15-30	25-30	NP-5
	4-12	Gravelly sandy loam, gravelly loamy sand	SM	A-1, A-2	0	0-10	80-90	70-80	45-55	20-30	25-30	NP-5
	12-26	Very cobbly loamy sand, extremely gravelly sand	GM, GP-GM, SM, SP-SM	A-1	0-5	10-45	35-60	20-50	15-35	5-15	0-10	NP
	26-37	Extremely gravelly sand, very gravelly sand, very cobbly loamy sand	GP, SP	A-1	0-10	25-40	35-60	30-55	10-25	0-5	0-10	NP
	37-47	Weathered bedrock			---	---	---	---	---	---	---	---
333: Tronsen---------	0-9	Stony silt loam	CL-ML, ML, SC-SM, SM	A-4	5-10	10-20	80-90	70-80	55-75	40-70	20-30	NP-10
	9-30	Very gravelly clay loam, very cobbly clay loam, very gravelly clay	GC	A-2, A-6, A-7	0-10	10-20	50-70	40-60	35-60	30-50	35-45	15-25
	30-60	Extremely gravelly clay, very cobbly clay, very cobbly clay loam	GC	A-2, A-7	0-10	10-30	25-60	25-50	20-45	20-40	40-55	20-35
334: Tronsen---------	0-9	Stony silt loam	CL-ML, ML, SC-SM, SM	A-4	5-10	10-20	80-90	70-80	55-75	40-70	20-30	NP-10
	9-30	Very gravelly clay loam, very cobbly clay loam, very gravelly clay	GC	A-2, A-6, A-7	0-10	10-20	50-70	40-60	35-60	30-50	35-45	15-25
	30-60	Extremely gravelly clay, very cobbly clay, very cobbly clay loam	GC	A-2, A-7	0-10	10-30	25-60	25-50	20-45	20-40	40-55	20-35
335: Tyee------------	0-5	Gravelly loamy coarse sand	SM	A-1	0	0-10	90-100	50-75	20-35	10-20	0-10	NP
	5-12	Gravelly loam, gravelly coarse sandy loam, sandy loam	SM	A-1, A-2, A-4	0	0-10	70-100	50-85	25-60	20-45	0-10	NP
	12-16	Weathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
336:												
Tyee------------	0-11	Gravelly sandy loam	SM	A-1, A-2	0	0-10	90-100	50-75	35-50	20-30	15-20	NP-5
	11-19	Gravelly loam, gravelly coarse sandy loam, sandy loam	SM	A-1, A-2, A-4	0	0-10	70-100	50-85	25-60	20-45	0-10	NP
	19-29	Weathered bedrock			---	---	---	---	---	---	---	---
337:												
Tyee------------	0-11	Gravelly sandy loam	SM	A-1, A-2	0	0-10	90-100	50-75	35-50	20-30	15-20	NP-5
	11-19	Gravelly loam, gravelly coarse sandy loam, sandy loam	SM	A-1, A-2, A-4	0	0-10	70-100	50-85	25-60	20-45	0-10	NP
	19-29	Weathered bedrock			---	---	---	---	---	---	---	---
338:												
Tyee------------	0-11	Gravelly sandy loam	SM	A-1, A-2	0	0-10	90-100	50-75	35-50	20-30	15-20	NP-5
	11-19	Gravelly loam, gravelly coarse sandy loam, sandy loam	SM	A-1, A-2, A-4	0	0-10	70-100	50-85	25-60	20-45	0-10	NP
	19-29	Weathered bedrock			---	---	---	---	---	---	---	---
Bisping---------	0-4	Fine sandy loam	SM	A-2, A-4	0	0-5	90-100	80-90	60-75	30-50	30-40	NP-5
	4-30	Cindery fine sandy loam, cindery sandy loam	SM	A-1, A-2	0	0-5	90-100	55-75	40-60	20-35	30-40	NP-5
	30-60	Loam, gravelly loam	ML, SM	A-4	0	0-10	70-100	60-95	50-80	40-70	20-25	NP-5
339:												
Typic Cryaquands	0-9	Silt loam	ML, SM	A-4	0	0	85-100	50-100	45-100	40-85	30-40	NP-5
	9-15	Very fine sandy loam, gravelly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	0	0	70-100	35-85	25-70	15-50	30-40	NP-5
	15-24	Fine sandy loam, cinders, gravelly sandy loam	SM, SP-SM	A-1, A-2, A-3	0	0	65-100	10-85	10-70	5-35	20-30	NP-5
	24-60	Fine sandy loam, cinders, very gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1, A-2, A-3	0	0-20	50-80	10-70	10-55	5-35	15-25	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
340:												
Vabbing	0-3	Bouldery sandy loam	SM	A-1, A-2	5-10	0-5	95-100	65-75	40-50	20-30	25-30	NP-5
	3-10	Very cindery sandy loam, cindery loamy sand, cindery sandy loam	SM, SP-SM	A-1	0	0-5	95-100	30-45	15-35	5-20	25-30	NP-5
	10-26	Extremely cindery sandy loam, very cindery sandy loam, very cindery coarse sand, cinders	SM, SP-SM	A-1	0	0-5	95-100	20-40	10-30	5-15	25-30	NP-5
	26-60	Extremely stony sandy loam, very gravelly sandy loam, very stony sandy loam	GM	A-1, A-2	15-30	5-30	25-60	20-55	15-50	10-30	20-25	NP-5
341:												
Vabbing	0-3	Bouldery sandy loam	SM	A-1, A-2	5-10	0-5	95-100	65-75	40-50	20-30	25-30	NP-5
	3-10	Very cindery sandy loam, cindery loamy sand, cindery sandy loam	SM, SP-SM	A-1	0	0-5	95-100	30-45	15-35	5-20	25-30	NP-5
	10-26	Extremely cindery sandy loam, very cindery sandy loam, very cindery coarse sand, cinders	SM, SP-SM	A-1	0	0-5	95-100	20-40	10-30	5-15	25-30	NP-5
	26-60	Extremely stony sandy loam, very gravelly sandy loam, very stony sandy loam	GM	A-1, A-2	15-30	5-30	25-60	20-55	15-50	10-30	20-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
342:												
Vabbing---------	0-3	Bouldery sandy loam	SM	A-1, A-2	5-10	0-5	95-100	65-75	40-50	20-30	25-30	NP-5
	3-10	Very cindery sandy loam, cindery loamy sand, cindery sandy loam	SM, SP-SM	A-1	0	0-5	95-100	30-45	15-35	5-20	25-30	NP-5
	10-26	Extremely cindery sandy loam, very cindery sandy loam, very cindery coarse sand, cinders	SM, SP-SM	A-1	0	0-5	95-100	20-40	10-30	5-15	25-30	NP-5
	26-60	Extremely stony sandy loam, very gravelly sandy loam, very stony sandy loam	GM	A-1, A-2	15-30	5-30	25-60	20-55	15-50	10-30	20-25	NP-5
Gilpar----------	0-6	Very stony sandy loam	SM	A-1, A-2	10-20	10-25	65-75	55-65	35-45	20-30	20-25	NP-5
	6-28	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM	A-1, A-2	0-15	15-25	45-65	30-60	30-45	10-30	20-25	NP-5
	28-60	Very channery sandy loam, very gravelly sandy loam, extremely gravelly sandy loam	GM, SM	A-1	0-10	15-25	45-65	30-50	30-40	10-25	20-25	NP-5
343:												
Vabbing---------	0-3	Bouldery sandy loam	SM	A-1, A-2	5-10	0-5	95-100	65-75	40-50	20-30	25-30	NP-5
	3-10	Very cindery sandy loam, cindery loamy sand, cindery sandy loam	SM, SP-SM	A-1	0	0-5	95-100	30-45	15-35	5-20	25-30	NP-5
	10-26	Extremely cindery sandy loam, very cindery sandy loam, very cindery coarse sand, cinders	SM, SP-SM	A-1	0	0-5	95-100	20-40	10-30	5-15	25-30	NP-5
	26-60	Extremely stony sandy loam, very gravelly sandy loam, very stony sandy loam	GM	A-1, A-2	15-30	5-30	25-60	20-55	15-50	10-30	20-25	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
343:												
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
344:												
Vabus-----------	0-6	Gravelly fine sandy loam	SM	A-2	0	0-5	65-85	55-75	40-55	25-35	25-30	NP-5
	6-36	Very gravelly sandy loam, extremely gravelly sandy loam, extremely cobbly sandy loam	GM	A-1	0-40	5-45	40-55	30-45	20-30	10-20	20-25	NP-5
	36-60	Dense glacial till			---	---	---	---	---	---	---	---
345:												
Vabus-----------	0-6	Gravelly fine sandy loam	SM	A-2	0	0-5	65-85	55-75	40-55	25-35	25-30	NP-5
	6-36	Very gravelly sandy loam, extremely gravelly sandy loam, extremely cobbly sandy loam	GM	A-1	0-40	5-45	40-55	30-45	20-30	10-20	20-25	NP-5
	36-60	Dense glacial till			---	---	---	---	---	---	---	---
346:												
Vabus-----------	0-6	Gravelly fine sandy loam	SM	A-2	0	0-5	65-85	55-75	40-55	25-35	25-30	NP-5
	6-36	Very gravelly sandy loam, extremely gravelly sandy loam, extremely cobbly sandy loam	GM	A-1	0-40	5-45	40-55	30-45	20-30	10-20	20-25	NP-5
	36-60	Dense glacial till			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
346:												
Chinkmin--------	0-4	Bouldery fine sandy loam	SM	A-4	5-15	0-5	90-95	85-95	60-80	35-50	30-40	NP-10
	4-7	Gravelly fine sandy loam, gravelly sandy loam, fine sandy loam	SM	A-2, A-4	0	0-10	90-95	85-95	50-80	30-50	30-40	NP-10
	7-18	Gravelly sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	SM	A-2, A-4	0	0-30	70-95	60-85	35-70	20-45	30-40	NP-5
	18-36	Very gravelly sandy loam, very cobbly sandy loam, very gravelly loamy coarse sand	GM, SM	A-1, A-2	0	15-30	50-70	35-55	20-40	5-25	25-30	NP-5
	36-40	Cemented glacial till			---	---	---	---	---	---	---	---
347:												
Vabus-----------	0-6	Gravelly fine sandy loam	SM	A-2	0	0-5	65-85	55-75	40-55	25-35	25-30	NP-5
	6-36	Very gravelly sandy loam, extremely gravelly sandy loam, extremely cobbly sandy loam	GM	A-1	0-40	5-45	40-55	30-45	20-30	10-20	20-25	NP-5
	36-40	Cemented glacial till			---	---	---	---	---	---	---	---
Chinkmin--------	0-4	Bouldery fine sandy loam	SM	A-4	5-15	0-5	90-95	85-95	60-80	35-50	30-40	NP-10
	4-7	Gravelly fine sandy loam, gravelly sandy loam, fine sandy loam	SM	A-2, A-4	0	0-10	90-95	85-95	50-80	30-50	30-40	NP-10
	7-18	Gravelly sandy loam, very cobbly fine sandy loam, very gravelly sandy loam	SM	A-2, A-4	0	0-30	70-95	60-85	35-70	20-45	30-40	NP-5
	18-36	Very gravelly sandy loam, very cobbly sandy loam, very gravelly loamy coarse sand	GM, SM	A-1, A-2	0	15-30	50-70	35-55	20-40	5-25	25-30	NP-5
	36-40	Cemented glacial till			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
348:												
Varelum---------	0-18	Loam	ML	A-4	0	0	95-100	90-100	75-95	55-70	20-25	NP-5
	18-42	Clay loam, sandy clay loam, loam	CL, SC	A-6	0	0	95-100	90-100	75-100	40-80	30-35	10-15
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
349:												
Varelum---------	0-18	Loam	ML	A-4	0	0	95-100	90-100	75-95	55-70	20-25	NP-5
	18-42	Clay loam, sandy clay loam, loam	CL, SC	A-6	0	0	95-100	90-100	75-100	40-80	30-35	10-15
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
350:												
Varelum---------	0-18	Loam	ML	A-4	0	0	95-100	90-100	75-95	55-70	20-25	NP-5
	18-42	Clay loam, sandy clay loam, loam	CL, SC	A-6	0	0	95-100	90-100	75-100	40-80	30-35	10-15
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
351:												
Varelum---------	0-18	Loam	ML	A-4	0	0	95-100	90-100	75-95	55-70	20-25	NP-5
	18-42	Clay loam, sandy clay loam, loam	CL, SC	A-6	0	0	95-100	90-100	75-100	40-80	30-35	10-15
	42-52	Weathered bedrock			---	---	---	---	---	---	---	---
352:												
Vitricryands----	0-12	Sandy loam	SM	A-2, A-4	0	0-5	90-100	85-100	50-70	30-40	30-35	NP-5
	12-26	Gravelly coarse sandy loam, very gravelly sandy loam, stony sandy loam	GM, SM	A-1, A-2	0-20	5-30	50-90	40-80	25-60	15-30	30-35	NP-5
	26-36	Weathered bedrock			---	---	---	---	---	---	---	---
353:												
Vitricryands----	0-12	Sandy loam	SM	A-2, A-4	0	0-5	90-100	85-100	50-70	30-40	30-35	NP-5
	12-26	Gravelly coarse sandy loam, very gravelly sandy loam, stony sandy loam	GM, SM	A-1, A-2	0-20	5-30	50-90	40-80	25-60	15-30	30-35	NP-5
	26-36	Weathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
354:												
Wagberg---------	0-5	Stony fine sandy loam	SM	A-1, A-2, A-4	10-15	5-15	60-85	50-75	35-65	20-40	25-35	NP-5
	5-13	Cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-10	5-15	70-85	60-75	35-50	20-30	25-35	NP-5
	13-38	Very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0-10	15-40	50-70	40-60	25-40	15-25	20-30	NP-5
	38-53	Very cobbly coarse sandy loam, very cobbly sandy loam, very gravelly coarse sandy loam	GM, SM	A-1, A-2	0-10	15-45	55-70	45-60	25-40	15-25	20-30	NP
	53-60	Very cobbly loamy sand, very cobbly coarse sandy loam, very gravelly sandy loam	SM	A-1, A-2	0-10	15-45	55-70	45-60	20-45	5-20	0-10	NP
355:												
Wagberg---------	0-5	Stony fine sandy loam	SM	A-1, A-2, A-4	10-15	5-15	60-85	50-75	35-65	20-40	25-35	NP-5
	5-13	Cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-10	5-15	70-85	60-75	35-50	20-30	25-35	NP-5
	13-38	Very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0-10	15-40	50-70	40-60	25-40	15-25	20-30	NP-5
	38-53	Very cobbly coarse sandy loam, very cobbly sandy loam, very gravelly coarse sandy loam	GM, SM	A-1, A-2	0-10	15-45	55-70	45-60	25-40	15-25	20-30	NP
	53-60	Very cobbly loamy sand, very cobbly coarse sandy loam, very gravelly sandy loam	SM	A-1, A-2	0-10	15-45	55-70	45-60	20-45	5-20	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
356:												
Wagberg---------	0-4	Very stony fine sandy loam	SM	A-1, A-2, A-4	20-30	5-15	60-85	50-75	35-65	20-40	25-35	NP-5
	4-15	Cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-10	5-15	70-85	60-75	35-50	20-30	25-35	NP-5
	15-40	Very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0-10	15-40	50-70	40-60	25-40	15-25	20-30	NP-5
	40-60	Very cobbly coarse sandy loam, very cobbly sandy loam, very gravelly coarse sandy loam	GM, SM	A-1, A-2	0-10	15-45	55-70	45-60	25-40	15-25	0-10	NP
Wagberg, south--	0-5	Stony fine sandy loam	SM	A-1, A-2, A-4	10-15	5-15	60-85	50-75	35-65	20-40	25-35	NP-5
	5-13	Cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-10	5-15	70-85	60-75	35-50	20-30	25-35	NP-5
	13-38	Very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0-10	15-40	50-70	40-60	25-40	15-25	20-30	NP-5
	38-53	Very cobbly coarse sandy loam, very cobbly sandy loam, very gravelly coarse sandy loam	GM, SM	A-1, A-2	0-10	15-45	55-70	45-60	25-40	15-25	20-30	NP-5
	53-60	Very cobbly loamy sand, very cobbly coarse sandy loam, very gravelly sandy loam	SM	A-1, A-2	0-10	15-45	55-70	45-60	20-45	5-20	0-10	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
357:												
Wagberg---------	0-5	Stony fine sandy loam	SM	A-1, A-2, A-4	10-15	5-15	60-85	50-75	35-65	20-40	25-35	NP-5
	5-13	Cobbly sandy loam, gravelly sandy loam	SM	A-1, A-2	0-10	5-15	70-85	60-75	35-50	20-30	25-35	NP-5
	13-38	Very cobbly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0-10	15-40	50-70	40-60	25-40	15-25	20-30	NP-5
	38-53	Very cobbly coarse sandy loam, very cobbly sandy loam, very gravelly coarse sandy loam	GM, SM	A-1, A-2	0-10	15-45	55-70	45-60	25-40	15-25	20-30	NP-5
	53-60	Very cobbly loamy sand, very cobbly coarse sandy loam, very gravelly sandy loam	SM	A-1, A-2	0-10	15-45	55-70	45-60	20-45	5-20	0-10	NP
Swakane---------	0-2	Stony sandy loam	SM	A-1, A-2	5-15	10-20	60-80	50-70	30-50	15-30	20-30	NP-5
	2-15	Very gravelly loam, very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1, A-2	0-10	10-30	35-60	25-50	15-45	10-35	20-30	NP-5
	15-19	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
358:												
Wedge-----------	0-5	Cindery sandy loam	SM	A-1, A-2	0	0	80-90	60-75	40-60	20-30	25-30	NP-5
	5-11	Very cindery fine sandy loam, cindery sandy loam	SM	A-1	0	0	65-80	35-50	25-50	10-25	25-30	NP-5
	11-31	Very cindery sandy loam, extremely cindery sandy loam, extremely cindery loamy sand	SM	A-1	0	0	100	25-35	15-25	10-15	25-30	NP-5
	31-60	Cinders	SP	A-1	0	0	95-100	15-40	10-30	0-5	25-30	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
359:												
Wedge-----------	0-5	Cindery sandy loam	SM	A-1, A-2	0	0	80-90	60-75	40-60	20-30	25-30	NP-5
	5-11	Very cindery fine sandy loam, cindery sandy loam	SM	A-1	0	0	65-80	35-50	25-50	10-25	25-30	NP-5
	11-31	Very cindery sandy loam, extremely cindery sandy loam, extremely cindery loamy sand	SM	A-1	0	0	100	25-35	15-25	10-15	25-30	NP-5
	31-60	Cinders	SP	A-1	0	0	95-100	15-40	10-30	0-5	25-30	NP-5
360:												
Wedge-----------	0-5	Cindery fine sandy loam	SM	A-1, A-2	0	0	100	60-75	50-60	30-40	25-30	NP-5
	5-17	Extremely cindery loamy sand, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0	100	25-35	15-25	10-15	25-30	NP-5
	17-60	Cinders	SP	A-1	0	0	95-100	15-40	10-30	0-5	25-30	NP-5
361:												
Wedge-----------	0-5	Cindery fine sandy loam	SM	A-1, A-2	0	0	100	60-75	50-60	30-40	25-30	NP-5
	5-17	Extremely cindery loamy sand, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0	100	25-35	15-25	10-15	25-30	NP-5
	17-60	Cinders	SP	A-1	0	0	95-100	15-40	10-30	0-5	25-30	NP-5
362:												
Wedge-----------	0-5	Cindery fine sandy loam	SM	A-1, A-2	0	0	100	60-75	50-60	30-40	25-30	NP-5
	5-17	Extremely cindery loamy sand, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0	100	25-35	15-25	10-15	25-30	NP-5
	17-60	Cinders	SP	A-1	0	0	95-100	15-40	10-30	0-5	25-30	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
362:												
Typic Cryaquands	0-9	Silt loam	ML, SM	A-4	0	0	85-100	50-100	45-100	40-85	30-40	NP-5
	9-15	Very fine sandy loam, gravelly sandy loam, very gravelly sandy loam	SM	A-1, A-2, A-4	0	0	70-100	35-85	25-70	15-50	30-40	NP-5
	15-24	Fine sandy loam, cinders, gravelly sandy loam	SM, SP-SM	A-1, A-2, A-3	0	0	65-100	10-85	10-70	5-35	20-30	NP-5
	24-60	Fine sandy loam, cinders, very gravelly sandy loam	GM, GP-GM, SM, SP-SM	A-1, A-2, A-3	0	0-20	50-80	10-70	10-55	5-35	15-25	NP
363:												
Wedge-----------	0-5	Cindery sandy loam	SM	A-1, A-2	0	0	80-90	60-75	40-60	20-30	25-30	NP-5
	5-11	Very cindery fine sandy loam, cindery sandy loam	SM	A-1	0	0	65-80	35-50	25-50	10-25	25-30	NP-5
	11-31	Very cindery sandy loam, extremely cindery sandy loam, extremely cindery loamy sand	SM	A-1	0	0	100	25-35	15-25	10-15	25-30	NP-5
	31-60	Cinders	SP	A-1	0	0	95-100	15-40	10-30	0-5	25-30	NP-5
Wedge, cold-----	0-5	Cindery fine sandy loam	SM	A-1, A-2	0	0	100	60-75	50-60	30-40	25-30	NP-5
	5-17	Extremely cindery loamy sand, very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0	100	25-35	15-25	10-15	25-30	NP-5
	17-60	Cinders	SP	A-1	0	0	95-100	15-40	10-30	0-5	25-30	NP-5

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
364:												
Wedgemont-------	0-1	Very cindery fine sandy loam	SM	A-1, A-2	0	0	100	30-50	15-40	10-30	20-30	NP-5
	1-19	Very cindery fine sandy loam, extremely cindery fine sandy loam	SM	A-1	0	0	95-100	20-50	15-40	5-20	20-30	NP-5
	19-28	Very cindery fine sandy loam, extremely cindery sandy loam	SM	A-1	0	0	95-100	20-50	15-40	5-20	20-30	NP-5
	28-60	Extremely gravelly sandy loam, very gravelly fine sandy loam	GM	A-1	0-10	10-25	40-60	25-50	20-40	10-20	20-30	NP-5
365:												
Wilma-----------	0-4	Stony fine sandy loam	SM	A-2, A-4	5-10	0-10	75-90	65-85	50-70	25-45	25-30	NP-5
	4-12	Gravelly sandy loam, gravelly fine sandy loam, very gravelly sandy loam	SM	A-1, A-2	0-5	0-15	60-85	45-70	30-55	15-35	25-30	NP-5
	12-24	Very gravelly fine sandy loam, very gravelly sandy loam	GM, SM	A-1	0-5	0-15	50-70	30-45	20-40	10-20	15-20	NP-5
	24-37	Very gravelly sandy loam, very gravelly loamy sand	GM, GP-GM, SM, SP-SM	A-1	0-5	0-15	50-75	30-50	20-45	5-20	15-20	NP-5
	37-41	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
366:												
Wilma----------	0-4	Stony fine sandy loam	SM	A-2, A-4	5-10	0-10	75-90	65-85	50-70	25-45	25-30	NP-5
	4-12	Gravelly sandy loam, gravelly fine sandy loam, very gravelly sandy loam	SM	A-1, A-2	0-5	0-15	60-85	45-70	30-55	15-35	25-30	NP-5
	12-24	Very gravelly fine sandy loam, very gravelly sandy loam	GM, SM	A-1	0-5	0-15	50-70	30-45	20-40	10-20	15-20	NP-5
	24-37	Very gravelly sandy loam, very gravelly loamy sand	GM, GP-GM, SM, SP-SM	A-1	0-5	0-15	50-75	30-50	20-45	5-20	15-20	NP-5
	37-41	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Bedrock			---	---	---	---	---	---	---	---
367:												
Yaxing----------	0-9	Loam	CL-ML	A-4	0	0	100	95-100	80-95	60-75	25-30	5-10
	9-21	Loam	CL	A-6	0	0	100	95-100	80-95	60-75	30-35	10-15
	21-36	Loam, clay loam	CL	A-6	0	0	100	95-100	80-100	60-80	30-40	15-25
	36-60	Loam	CL	A-6	0	0	100	95-100	80-100	60-80	30-40	15-25
368:												
Yaxing----------	0-9	Loam	CL-ML	A-4	0	0	100	95-100	80-95	60-75	25-30	5-10
	9-21	Loam	CL	A-6	0	0	100	95-100	80-95	60-75	30-35	10-15
	21-36	Loam, clay loam	CL	A-6	0	0	100	95-100	80-100	60-80	30-40	15-25
	36-60	Loam	CL	A-6	0	0	100	95-100	80-100	60-80	30-40	15-25
369:												
Yaxon-----------	0-14	Silt loam	CL-ML	A-4	0	0	100	95-100	90-100	70-90	20-25	5-10
	14-40	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	10-20
	40-60	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	25-35	10-15
370:												
Yaxon-----------	0-14	Silt loam	CL-ML	A-4	0	0	100	95-100	90-100	70-90	20-25	5-10
	14-40	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	10-20
	40-60	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	25-35	10-15
371:												
Yaxon-----------	0-14	Silt loam	CL-ML	A-4	0	0	100	95-100	90-100	70-90	20-25	5-10
	14-40	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	10-20
	40-60	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	25-35	10-15

Table 14.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
372:												
Yaxon-----------	0-14	Silt loam	CL-ML	A-4	0	0	100	95-100	90-100	70-90	20-25	5-10
	14-40	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	10-20
	40-60	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	25-35	10-15
373:												
Yaxon-----------	0-16	Silt loam	CL-ML	A-4	0	0	100	95-100	90-100	70-90	20-25	5-10
	16-54	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	10-20
	54-60	Clay loam, sandy clay loam, loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	25-35	10-15
374:												
Zeb-------------	0-2	Stony sandy loam	SM	A-2, A-4	5-10	5-15	80-95	70-90	40-65	25-40	15-20	NP-5
	2-11	Gravelly sandy loam, gravelly fine sandy loam, very gravelly sandy loam	SM	A-2, A-4	0-5	0-15	70-90	60-80	35-65	25-45	15-20	NP-5
	11-28	Very gravelly sandy loam, very cobbly sandy loam	GM, SM	A-1	0-10	15-25	45-70	35-65	20-45	10-25	15-20	NP-5
	28-60	Very cobbly coarse sandy loam, very stony sandy loam, extremely cobbly sandy loam	GM, SM	A-1, A-2	15-25	5-25	40-70	30-60	15-40	10-25	15-20	NP-5
W:												
Water-----------	---	---	---	---	---	---	---	---	---	---	---	---

Table 15.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
1:												
Aeric Fluvaquents-----	0-8	10-20	1.10-1.20	0.6-2.0	0.19-0.21	0.0-2.9	2.0-4.0	0.37	0.37	5	5	56
	8-27	10-35	1.10-1.30	0.2-2.0	0.19-0.21	3.0-5.9	0.5-1.0	0.37	0.37			
	27-36	5-35	1.35-1.55	0.2-2.0	0.15-0.21	3.0-5.9	0.0-0.5	0.32	0.37			
	36-60	0-35	1.35-1.55	0.6-20.0	0.03-0.21	3.0-5.9	0.0-0.5	0.20	0.28			
2:												
Almac-----------------	0-3	6-12	0.75-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-5.0	0.37	0.43	5	3	86
	3-23	8-14	0.75-0.85	0.6-2.0	0.14-0.22	0.0-2.9	3.0-5.0	0.37	0.43			
	23-50	12-18	1.45-1.65	2.0-6.0	0.10-0.12	0.0-2.9	0.5-1.0	0.28	0.43			
	50-63	3-12	1.45-1.65	2.0-6.0	0.06-0.08	0.0-2.9	0.5-1.0	0.20	0.43			
3:												
Almac-----------------	0-3	6-12	0.75-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-5.0	0.37	0.43	5	3	86
	3-23	8-14	0.75-0.85	0.6-2.0	0.14-0.22	0.0-2.9	3.0-5.0	0.37	0.43			
	23-50	12-18	1.45-1.65	2.0-6.0	0.10-0.12	0.0-2.9	0.5-1.0	0.28	0.43			
	50-63	3-12	1.45-1.65	2.0-6.0	0.06-0.08	0.0-2.9	0.5-1.0	0.20	0.43			
4:												
Almac-----------------	0-3	6-12	0.75-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-5.0	0.37	0.43	5	3	86
	3-23	8-14	0.75-0.85	0.6-2.0	0.14-0.22	0.0-2.9	3.0-5.0	0.37	0.43			
	23-50	12-18	1.45-1.65	2.0-6.0	0.10-0.12	0.0-2.9	0.5-1.0	0.28	0.43			
	50-63	3-12	1.45-1.65	2.0-6.0	0.06-0.08	0.0-2.9	0.5-1.0	0.20	0.43			
5:												
Almac-----------------	0-8	6-12	0.75-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-5.0	0.37	0.43	5	3	86
	8-27	8-14	0.75-0.85	0.6-2.0	0.14-0.22	0.0-2.9	3.0-5.0	0.37	0.43			
	27-60	3-12	1.45-1.65	2.0-6.0	0.06-0.08	0.0-2.9	0.5-1.0	0.20	0.43			
Azwell----------------	0-4	10-16	0.85-0.95	0.6-2.0	0.14-0.16	0.0-2.9	1.0-3.0	0.20	0.28	2	6	48
	4-15	8-14	0.85-0.95	0.6-2.0	0.08-0.10	0.0-2.9	0.5-1.0	0.17	0.28			
	15-26	5-15	1.30-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.17	0.32			
	26-30	---	---	---	---	---	---	---	---			
6:												
Almac-----------------	0-8	6-12	0.75-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-5.0	0.37	0.43	5	3	86
	8-27	8-14	0.75-0.85	0.6-2.0	0.14-0.22	0.0-2.9	3.0-5.0	0.37	0.43			
	27-60	3-12	1.45-1.65	2.0-6.0	0.06-0.08	0.0-2.9	0.5-1.0	0.20	0.43			
Azwell----------------	0-4	10-16	0.85-0.95	0.6-2.0	0.14-0.16	0.0-2.9	1.0-3.0	0.20	0.28	2	6	48
	4-15	8-14	0.85-0.95	0.6-2.0	0.08-0.10	0.0-2.9	0.5-1.0	0.17	0.28			
	15-26	5-15	1.30-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.17	0.32			
	26-30	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
7:												
Almac-----------------	0-8	6-12	0.75-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-5.0	0.37	0.43	5	3	86
	8-27	8-14	0.75-0.85	0.6-2.0	0.14-0.22	0.0-2.9	3.0-5.0	0.37	0.43			
	27-60	3-12	1.45-1.65	2.0-6.0	0.06-0.08	0.0-2.9	0.5-1.0	0.20	0.43			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
8:												
Alnult----------------	0-6	5-14	1.20-1.30	0.6-2.0	0.07-0.10	0.0-2.9	4.0-6.0	0.10	0.32	5	6	48
	6-32	6-15	1.30-1.50	0.6-2.0	0.08-0.11	0.0-2.9	4.0-6.0	0.15	0.32			
	32-60	8-16	1.30-1.50	0.6-2.0	0.05-0.09	0.0-2.9	1.0-3.0	0.05	0.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
8:												
Reggad----------------	0-9	0-25	0.10-0.30	0.6-2.0	0.20-0.30	0.0-2.9	40-80	0.02	0.02	2	8	0
	9-60	0-2	1.35-1.60	20.0-100.0	0.02-0.04	0.0-2.9	0-0	0.02	---			
9:												
Altapeak--------------	0-13	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	13-29	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	29-54	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	54-64	---	---	---	---	---	---	---	---			
10:												
Altapeak--------------	0-13	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	13-29	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	29-54	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	54-64	---	---	---	---	---	---	---	---			
11:												
Altapeak--------------	0-13	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	13-29	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	29-54	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	54-64	---	---	---	---	---	---	---	---			
12:												
Altapeak--------------	0-6	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	6-26	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	26-48	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	48-58	---	---	---	---	---	---	---	---			
13:												
Altapeak--------------	0-13	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	13-29	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	29-54	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	54-64	---	---	---	---	---	---	---	---			
Alnult----------------	0-6	5-14	1.20-1.30	0.6-2.0	0.07-0.10	0.0-2.9	4.0-6.0	0.10	0.32	5	6	48
	6-32	6-15	1.30-1.50	0.6-2.0	0.08-0.11	0.0-2.9	4.0-6.0	0.15	0.32			
	32-60	8-16	1.30-1.50	0.6-2.0	0.05-0.09	0.0-2.9	1.0-3.0	0.05	0.37			
14:												
Altapeak--------------	0-6	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	6-26	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	26-48	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	48-58	---	---	---	---	---	---	---	---			
Alnult----------------	0-6	5-14	1.20-1.30	0.6-2.0	0.07-0.10	0.0-2.9	4.0-6.0	0.10	0.32	5	6	48
	6-32	6-15	1.30-1.50	0.6-2.0	0.08-0.11	0.0-2.9	4.0-6.0	0.15	0.32			
	32-60	8-16	1.30-1.50	0.6-2.0	0.05-0.09	0.0-2.9	1.0-3.0	0.05	0.37			
15:												
Altapeak--------------	0-6	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	6-26	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	26-48	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	48-58	---	---	---	---	---	---	---	---			
Alnult----------------	0-6	5-14	1.20-1.30	0.6-2.0	0.07-0.10	0.0-2.9	4.0-6.0	0.10	0.32	5	6	48
	6-32	6-15	1.30-1.50	0.6-2.0	0.08-0.11	0.0-2.9	4.0-6.0	0.15	0.32			
	32-60	8-16	1.30-1.50	0.6-2.0	0.05-0.09	0.0-2.9	1.0-3.0	0.05	0.37			
16:												
Anatone---------------	0-4	10-20	1.20-1.30	0.6-2.0	0.12-0.15	0.0-2.9	2.0-3.0	0.28	0.49	1	6	48
	4-11	10-30	1.20-1.30	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.10	0.49			
	11-15	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
16:												
Blewett---------------	0-3	5-10	1.10-1.30	0.6-2.0	0.05-0.08	0.0-2.9	1.0-3.0	0.10	0.32	1	6	48
	3-10	5-12	1.20-1.45	0.6-2.0	0.04-0.08	0.0-2.9	1.0-3.0	0.10	0.32			
	10-14	---	---	---	---	---	---	---	---			
17:												
Anatone---------------	0-4	10-20	1.20-1.30	0.6-2.0	0.12-0.15	0.0-2.9	2.0-3.0	0.28	0.49	1	6	48
	4-11	10-30	1.20-1.30	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.10	0.49			
	11-15	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
18:												
Andic Cryochrepts-----	0-4	10-20	0.85-0.95	0.6-2.0	0.10-0.14	0.0-2.9	1.0-3.0	0.10	0.28	5	8	0
	4-10	8-20	0.85-0.95	0.6-2.0	0.10-0.14	0.0-2.9	1.0-2.0	0.15	0.32			
	10-60	5-22	1.25-1.45	0.6-2.0	0.08-0.14	0.0-2.9	0.0-0.5	0.15	0.32			
19:												
Andic Cryumbrepts-----	0-8	6-14	0.65-0.85	0.6-2.0	0.07-0.08	0.0-2.9	3.0-4.0	0.10	0.28	5	3	86
	8-24	6-16	0.85-0.95	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.15	0.32			
	24-60	6-16	0.85-1.50	0.6-2.0	0.04-0.08	0.0-2.9	1.0-2.0	0.10	0.32			
20:												
Andic Cryumbrepts-----	0-9	6-14	0.65-0.85	0.6-2.0	0.11-0.13	0.0-2.9	3.0-4.0	0.24	0.28	2	3	86
	9-14	6-16	0.85-0.95	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.15	0.32			
	14-24	6-16	0.85-1.45	0.6-2.0	0.04-0.08	0.0-2.9	1.0-2.0	0.10	0.32			
	24-34	---	---	---	---	---	---	---	---			
21:												
Andic Cryumbrepts-----	0-9	6-14	0.65-0.85	0.6-2.0	0.11-0.13	0.0-2.9	3.0-4.0	0.24	0.28	2	3	86
	9-14	6-16	0.85-0.95	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.15	0.32			
	14-24	6-16	0.85-1.45	0.6-2.0	0.04-0.08	0.0-2.9	1.0-2.0	0.10	0.32			
	24-34	---	---	---	---	---	---	---	---			
Haplocryods-----------	0-3	8-12	0.75-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-4.0	0.32	0.32	5	3	86
	3-32	8-12	1.30-1.40	0.6-2.0	0.10-0.15	0.0-2.9	1.0-3.0	0.37	0.37			
	32-60	8-15	1.30-1.40	0.6-2.0	0.04-0.10	0.0-2.9	0.0-1.0	0.05	0.37			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
22:												
Andic Cryumbrepts-----	0-9	6-14	0.65-0.85	0.6-2.0	0.11-0.13	0.0-2.9	3.0-4.0	0.24	0.28	2	3	86
	9-14	6-16	0.85-0.95	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.15	0.32			
	14-24	6-16	0.85-1.45	0.6-2.0	0.04-0.08	0.0-2.9	1.0-2.0	0.10	0.32			
	24-34	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
23:												
Andic Cryumbrepts-----	0-10	6-14	0.70-0.85	2.0-6.0	0.09-0.12	0.0-2.9	2.0-3.0	0.28	0.28	3	3	86
	10-16	6-16	0.85-0.95	2.0-6.0	0.08-0.11	0.0-2.9	2.0-3.0	0.20	0.28			
	16-33	1-5	1.10-1.25	2.0-6.0	0.06-0.09	0.0-2.9	1.0-2.0	0.10	0.28			
	33-51	1-5	1.10-1.40	2.0-6.0	0.04-0.07	0.0-2.9	0.0-1.0	0.05	0.28			
	51-55	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
24:												
Andic Haplumbrepts----	0-8	6-14	0.85-0.95	0.6-2.0	0.07-0.12	0.0-2.9	3.0-4.0	0.17	0.28	2	3	86
	8-29	6-15	0.85-1.45	0.6-2.0	0.06-0.12	0.0-2.9	1.0-3.0	0.17	0.32			
	29-33	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
25:												
Angle-----------------	0-2	0-3	1.30-1.40	6.0-20.0	0.06-0.09	0.0-2.9	0.5-1.0	0.05	0.17	5	2	134
	2-7	1-5	1.30-1.50	2.0-6.0	0.06-0.09	0.0-2.9	0.5-1.0	0.05	0.17			
	7-42	1-5	1.40-1.50	2.0-6.0	0.06-0.09	0.0-2.9	0.0-0.5	0.15	0.20			
	42-60	0-3	1.50-1.60	6.0-20.0	0.04-0.06	0.0-2.9	0.0-0.5	0.10	0.10			
26:												
Aquic Cryumbrepts-----	0-4	5-10	1.20-1.30	2.0-6.0	0.09-0.17	0.0-2.9	2.0-3.0	0.28	0.28	5	2	134
	4-8	5-10	1.20-1.30	2.0-6.0	0.09-0.17	0.0-2.9	1.0-2.0	0.28	0.28			
	8-29	5-15	1.30-1.40	0.6-20.0	0.05-0.21	0.0-2.9	0.0-1.0	0.05	0.05			
	29-60	5-10	1.30-1.40	0.6-20.0	0.01-0.10	0.0-2.9	0.0-0.5	0.20	0.28			
27:												
Ardening--------------	0-6	10-16	1.10-1.30	0.6-2.0	0.12-0.14	0.0-2.9	1.0-2.0	0.17	0.32	4	5	56
	6-18	10-18	1.30-1.50	0.6-2.0	0.10-0.14	0.0-2.9	1.0-2.0	0.20	0.32			
	18-26	10-18	1.20-1.50	0.6-2.0	0.08-0.12	0.0-2.9	0.0-0.5	0.24	0.37			
	26-42	10-18	1.30-1.50	0.6-2.0	0.08-0.12	0.0-2.9	0.0-0.5	0.24	0.37			
	42-52	---	---	---	---	---	---	---	---			
28:												
Ardenmont-------------	0-4	5-10	1.10-1.30	0.6-2.0	0.15-0.17	0.0-2.9	0.5-1.0	0.32	0.32	4	5	56
	4-23	5-18	1.20-1.50	0.6-2.0	0.10-0.16	0.0-2.9	0.0-0.5	0.24	0.32			
	23-51	5-18	1.30-1.50	0.6-2.0	0.08-0.14	0.0-2.9	0.0-0.5	0.24	0.32			
	51-61	---	---	---	---	---	---	---	---			
29:												
Ardenmont-------------	0-4	5-10	1.10-1.30	0.6-2.0	0.15-0.17	0.0-2.9	0.5-1.0	0.32	0.32	4	5	56
	4-23	5-18	1.20-1.50	0.6-2.0	0.10-0.16	0.0-2.9	0.0-0.5	0.24	0.32			
	23-51	5-18	1.30-1.50	0.6-2.0	0.08-0.14	0.0-2.9	0.0-0.5	0.24	0.32			
	51-61	---	---	---	---	---	---	---	---			
30:												
Ardenmont-------------	0-4	5-10	1.10-1.30	0.6-2.0	0.15-0.17	0.0-2.9	0.5-1.0	0.32	0.32	4	5	56
	4-23	5-18	1.20-1.50	0.6-2.0	0.10-0.16	0.0-2.9	0.0-0.5	0.24	0.32			
	23-51	5-18	1.30-1.50	0.6-2.0	0.08-0.14	0.0-2.9	0.0-0.5	0.24	0.32			
	51-61	---	---	---	---	---	---	---	---			
31:												
Ardenmont-------------	0-4	5-10	1.10-1.30	0.6-2.0	0.15-0.17	0.0-2.9	0.5-1.0	0.32	0.32	4	5	56
	4-23	5-18	1.20-1.50	0.6-2.0	0.10-0.16	0.0-2.9	0.0-0.5	0.24	0.32			
	23-51	5-18	1.30-1.50	0.6-2.0	0.08-0.14	0.0-2.9	0.0-0.5	0.24	0.32			
	51-61	---	---	---	---	---	---	---	---			
Swakane---------------	0-2	5-10	1.35-1.45	0.6-2.0	0.09-0.10	0.0-2.9	1.0-3.0	0.17	0.28	1	4	86
	2-15	5-15	1.45-1.55	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.10	0.32			
	15-19	---	---	---	---	---	---	---	---			
32:												
Ardenvoir-------------	0-6	5-10	1.20-1.40	0.6-2.0	0.10-0.12	0.0-2.9	0.5-1.0	0.17	0.32	3	4	86
	6-12	5-10	1.35-1.50	0.6-2.0	0.08-0.09	0.0-2.9	0.0-0.5	0.05	0.20			
	12-56	5-10	1.35-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.37			
	56-60	---	---	---	---	---	---	---	---			
33:												
Ardenvoir-------------	0-6	5-10	1.20-1.40	0.6-2.0	0.10-0.12	0.0-2.9	0.5-1.0	0.17	0.32	3	4	86
	6-12	5-10	1.35-1.50	0.6-2.0	0.08-0.09	0.0-2.9	0.0-0.5	0.05	0.20			
	12-56	5-10	1.35-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.37			
	56-60	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
34:												
Azwell----------------	0-4	10-16	0.85-0.95	0.6-2.0	0.14-0.16	0.0-2.9	1.0-3.0	0.20	0.28	2	6	48
	4-15	8-14	0.85-0.95	0.6-2.0	0.08-0.10	0.0-2.9	0.5-1.0	0.17	0.28			
	15-26	5-15	1.30-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.17	0.32			
	26-30	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
35:												
Bagmont---------------	0-4	10-15	1.15-1.35	0.6-2.0	0.10-0.14	0.0-2.9	3.0-4.0	0.20	0.32	3	6	48
	4-12	10-15	1.15-1.35	2.0-6.0	0.09-0.13	0.0-2.9	1.0-2.0	0.17	0.28			
	12-38	5-10	1.30-1.50	0.6-2.0	0.05-0.08	0.0-2.9	0.0-1.0	0.10	0.28			
	38-48	---	---	---	---	---	---	---	---			
36:												
Bigcreek--------------	0-5	5-15	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	0.5-1.0	0.17	0.28	2	4	86
	5-16	5-15	0.65-0.85	0.6-2.0	0.10-0.13	0.0-2.9	0.5-1.0	0.17	0.28			
	16-30	0-2	0.65-0.85	20.0-100.0	0.05-0.07	0.0-2.9	0.0-0.5	0.05	---			
	30-33	0-4	0.85-0.95	20.0-100.0	0.05-0.09	0.0-2.9	0.0-0.5	0.02	0.15			
	33-38	2-8	0.65-0.85	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.17	0.32			
	38-60	1-2	1.60-1.70	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.20			
37:												
Billyridge------------	0-16	5-12	1.20-1.40	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.20	0.24	5	4	86
	16-40	5-12	1.35-1.50	0.6-2.0	0.10-0.14	0.0-2.9	0.5-1.0	0.24	0.28			
	40-60	5-12	1.40-1.50	0.6-2.0	0.10-0.14	0.0-2.9	0.0-0.5	0.24	0.28			
38:												
Billyridge------------	0-16	5-12	1.20-1.40	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.20	0.24	5	4	86
	16-40	5-12	1.35-1.50	0.6-2.0	0.10-0.14	0.0-2.9	0.5-1.0	0.24	0.28			
	40-60	5-12	1.40-1.50	0.6-2.0	0.10-0.14	0.0-2.9	0.0-0.5	0.24	0.28			
39:												
Billyridge------------	0-16	5-12	1.20-1.40	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.20	0.24	5	4	86
	16-40	5-12	1.35-1.50	0.6-2.0	0.10-0.14	0.0-2.9	0.5-1.0	0.24	0.28			
	40-60	5-12	1.40-1.50	0.6-2.0	0.10-0.14	0.0-2.9	0.0-0.5	0.24	0.28			
40:												
Bisping---------------	0-4	6-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	2.0-3.0	0.37	0.37	5	4	86
	4-30	5-15	0.65-0.85	0.6-2.0	0.16-0.18	0.0-2.9	2.0-3.0	0.20	0.37			
	30-60	12-18	1.10-1.20	0.6-2.0	0.14-0.16	0.0-2.9	0.5-1.0	0.32	0.43			
41:												
Bisping---------------	0-4	6-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	2.0-3.0	0.37	0.37	5	4	86
	4-30	5-15	0.65-0.85	0.6-2.0	0.16-0.18	0.0-2.9	2.0-3.0	0.20	0.37			
	30-60	12-18	1.10-1.20	0.6-2.0	0.14-0.16	0.0-2.9	0.5-1.0	0.32	0.43			
42:												
Bisping---------------	0-4	6-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	2.0-3.0	0.37	0.37	5	4	86
	4-30	5-15	0.65-0.85	0.6-2.0	0.16-0.18	0.0-2.9	2.0-3.0	0.20	0.37			
	30-60	12-18	1.10-1.20	0.6-2.0	0.14-0.16	0.0-2.9	0.5-1.0	0.32	0.43			
43:												
Bjork-----------------	0-10	15-20	1.15-1.30	0.6-2.0	0.17-0.20	0.0-2.9	1.0-3.0	0.43	0.43	3	5	56
	10-24	25-35	1.30-1.45	0.6-2.0	0.15-0.20	3.0-5.9	0.0-1.0	0.32	0.43			
	24-34	---	---	---	---	---	---	---	---			
44:												
Bjork-----------------	0-6	15-20	1.15-1.30	0.6-2.0	0.14-0.18	0.0-2.9	1.0-3.0	0.37	0.37	3	6	48
	6-30	25-35	1.30-1.45	0.6-2.0	0.15-0.20	3.0-5.9	0.0-1.0	0.32	0.37			
	30-40	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
44:												
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
45:												
Blag------------------	0-6	5-10	1.15-1.30	2.0-6.0	0.07-0.09	0.0-2.9	0.5-1.0	0.17	0.32	1	4	86
	6-16	5-10	1.30-1.50	2.0-6.0	0.07-0.09	0.0-2.9	0.0-0.5	0.24	0.32			
	16-20	---	---	---	---	---	---	---	---			
Cle Elum--------------	0-14	10-20	1.15-1.35	0.6-2.0	0.18-0.20	0.0-2.9	1.0-4.0	0.37	0.37	3	5	56
	14-26	25-35	1.25-1.45	0.6-2.0	0.17-0.20	3.0-5.9	0.0-1.0	0.37	0.43			
	26-32	---	---	---	---	---	0.0-0.5	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
46:												
Blag------------------	0-6	5-10	1.15-1.30	2.0-6.0	0.07-0.09	0.0-2.9	0.5-1.0	0.17	0.32	1	4	86
	6-16	5-10	1.30-1.50	2.0-6.0	0.07-0.09	0.0-2.9	0.0-0.5	0.24	0.32			
	16-20	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
47:												
Blewett---------------	0-3	5-10	1.10-1.30	0.6-2.0	0.05-0.08	0.0-2.9	1.0-3.0	0.10	0.32	1	6	48
	3-10	5-12	1.20-1.45	0.6-2.0	0.04-0.08	0.0-2.9	1.0-3.0	0.10	0.32			
	10-14	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
48:												
Borland---------------	0-6	15-20	1.15-1.30	0.6-2.0	0.15-0.17	0.0-2.9	1.0-2.0	0.32	0.32	1	5	56
	6-11	20-30	1.40-1.50	0.2-0.6	0.16-0.20	3.0-5.9	1.0-2.0	0.28	0.32			
	11-15	---	---	---	---	---	---	---	---			
49:												
Borland---------------	0-6	15-20	1.15-1.30	0.6-2.0	0.15-0.17	0.0-2.9	1.0-2.0	0.32	0.32	1	5	56
	6-11	20-30	1.40-1.50	0.2-0.6	0.16-0.20	3.0-5.9	1.0-2.0	0.28	0.32			
	11-15	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
50:												
Brief-----------------	0-16	5-12	1.20-1.40	2.0-6.0	0.06-0.09	0.0-2.9	1.0-3.0	0.15	0.32	5	4	86
	16-26	5-12	1.30-1.50	2.0-6.0	0.06-0.09	0.0-2.9	0.5-1.0	0.15	0.32			
	26-60	5-12	1.30-1.50	2.0-6.0	0.05-0.09	0.0-2.9	0.0-0.5	0.10	0.32			
51:												
Brisky----------------	0-4	5-15	1.10-1.30	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.10	0.32	1	6	48
	4-10	5-15	1.20-1.45	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.15	0.37			
	10-14	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
52:												
Burch-----------------	0-10	10-15	1.15-1.35	0.6-2.0	0.17-0.20	0.0-2.9	1.0-2.0	0.43	0.43	5	5	56
	10-60	10-15	1.30-1.50	0.6-2.0	0.17-0.20	0.0-2.9	0.0-1.0	0.49	0.49			
53:												
Burnscreek------------	0-3	9-12	1.15-1.40	0.6-2.0	0.08-0.14	0.0-2.9	2.0-3.0	0.15	0.24	5	3	86
	3-13	8-10	1.35-1.55	0.6-2.0	0.07-0.13	0.0-2.9	1.0-2.0	0.17	0.28			
	13-60	8-10	1.35-1.55	0.6-2.0	0.04-0.10	0.0-2.9	0.5-1.0	0.10	0.28			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
54:												
Burrant---------------	0-16	10-18	1.15-1.30	0.6-2.0	0.16-0.18	0.0-2.9	2.0-3.0	0.37	0.37	5	5	56
	16-42	10-18	1.30-1.45	0.6-2.0	0.16-0.19	0.0-2.9	0.5-1.0	0.43	0.43			
	42-60	10-18	1.30-1.45	0.6-2.0	0.16-0.21	0.0-2.9	0.0-0.5	0.43	0.43			
55:												
Burrant---------------	0-16	10-18	1.15-1.30	0.6-2.0	0.16-0.18	0.0-2.9	2.0-3.0	0.37	0.37	5	5	56
	16-42	10-18	1.30-1.45	0.6-2.0	0.16-0.19	0.0-2.9	0.5-1.0	0.43	0.43			
	42-60	10-18	1.30-1.45	0.6-2.0	0.16-0.21	0.0-2.9	0.0-0.5	0.43	0.43			
56:												
Cashmont--------------	0-12	6-12	1.20-1.40	2.0-6.0	0.11-0.13	0.0-2.9	1.0-2.0	0.20	0.24	4	3	86
	12-30	6-12	1.35-1.50	2.0-6.0	0.10-0.12	0.0-2.9	0.5-2.0	0.15	0.28			
	30-40	6-12	1.35-1.50	2.0-6.0	0.09-0.11	0.0-2.9	0.0-0.5	0.10	0.32			
	40-60	0-7	1.40-1.60	6.0-20.0	0.05-0.09	0.0-2.9	0.0-0.5	0.10	0.28			
57:												
Cashmont--------------	0-10	6-12	1.20-1.40	2.0-6.0	0.09-0.11	0.0-2.9	1.0-2.0	0.15	0.28	5	4	86
	10-28	6-12	1.35-1.50	2.0-6.0	0.10-0.12	0.0-2.9	0.5-2.0	0.15	0.28			
	28-60	6-12	1.35-1.50	2.0-6.0	0.09-0.11	0.0-2.9	0.0-0.5	0.10	0.32			
58:												
Chapot----------------	0-8	16-22	1.50-1.60	0.6-2.0	0.09-0.13	0.0-2.9	0.5-1.0	0.10	0.32	5	8	0
	8-16	20-25	1.55-1.65	0.6-2.0	0.07-0.11	0.0-2.9	0.5-1.0	0.15	0.32			
	16-60	28-35	1.60-1.70	0.2-0.6	0.08-0.14	3.0-5.9	0.0-0.5	0.10	0.24			
59:												
Chinkmin--------------	0-4	6-14	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	6.0-13	0.20	0.28	3	3	86
	4-7	5-15	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	0.5-1.0	0.20	0.28			
	7-18	5-15	0.95-1.10	0.6-2.0	0.11-0.17	0.0-2.9	0.0-0.5	0.17	0.28			
	18-36	2-10	0.95-1.20	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	36-40	---	1.60-1.80	0.00-0.06	0.02-0.04	---	---	---	---			
60:												
Chinkmin--------------	0-4	6-14	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	6.0-13	0.20	0.28	3	3	86
	4-7	5-15	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	0.5-1.0	0.20	0.28			
	7-18	5-15	0.95-1.10	0.6-2.0	0.11-0.17	0.0-2.9	0.0-0.5	0.17	0.28			
	18-36	2-10	0.95-1.20	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	36-40	---	1.60-1.80	0.00-0.06	0.02-0.04	---	---	---	---			
61:												
Chinkmin--------------	0-4	6-14	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	6.0-13	0.20	0.28	3	3	86
	4-7	5-15	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	0.5-1.0	0.20	0.28			
	7-18	5-15	0.95-1.10	0.6-2.0	0.11-0.17	0.0-2.9	0.0-0.5	0.17	0.28			
	18-36	2-10	0.95-1.20	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	36-40	---	1.60-1.80	0.00-0.06	0.02-0.04	---	---	---	---			
Altapeak--------------	0-6	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	6-26	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	26-48	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	48-58	---	---	---	---	---	---	---	---			
62:												
Chinkmin--------------	0-4	6-14	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	6.0-13	0.20	0.28	3	3	86
	4-7	5-15	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	0.5-1.0	0.20	0.28			
	7-18	5-15	0.95-1.10	0.6-2.0	0.11-0.17	0.0-2.9	0.0-0.5	0.17	0.28			
	18-36	2-10	0.95-1.20	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	36-40	---	1.60-1.80	0.00-0.06	0.02-0.04	---	---	---	---			
Altapeak--------------	0-6	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	6-26	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	26-48	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	48-58	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
63:												
Chiwaukum-------------	0-2	4-14	0.85-1.10	0.6-2.0	0.10-0.12	0.0-2.9	2.0-6.0	0.24	0.28	4	3	86
	2-11	5-15	0.85-1.10	0.6-2.0	0.09-0.12	0.0-2.9	1.0-3.0	0.17	0.32			
	11-39	4-12	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	0.5-1.0	0.17	0.32			
	39-60	2-10	1.25-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
64:												
Chiwaukum-------------	0-5	4-14	0.85-1.10	0.6-2.0	0.12-0.14	0.0-2.9	2.0-6.0	0.32	0.37	4	3	86
	5-17	5-15	0.85-1.10	0.6-2.0	0.09-0.12	0.0-2.9	1.0-3.0	0.17	0.32			
	17-26	4-12	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	0.5-1.0	0.17	0.32			
	26-60	2-10	1.25-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
65:												
Chiwaukum-------------	0-10	4-14	0.85-1.10	0.6-2.0	0.12-0.14	0.0-2.9	2.0-6.0	0.32	0.37	4	3	86
	10-38	5-15	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	0.5-1.0	0.17	0.32			
	38-60	2-10	1.25-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
66:												
Chiwaukum-------------	0-2	4-14	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	2.0-6.0	0.24	0.37	4	3	86
	2-15	5-15	0.85-1.10	0.6-2.0	0.09-0.12	0.0-2.9	1.0-3.0	0.17	0.32			
	15-24	4-12	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	0.5-1.0	0.17	0.32			
	24-60	2-10	1.25-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
67:												
Chiwaukum-------------	0-2	4-14	0.85-1.10	0.6-2.0	0.10-0.12	0.0-2.9	2.0-6.0	0.24	0.28	4	3	86
	2-11	5-15	0.85-1.10	0.6-2.0	0.09-0.12	0.0-2.9	1.0-3.0	0.17	0.32			
	11-39	4-12	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	0.5-1.0	0.17	0.32			
	39-60	2-10	1.25-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
Chiwaukum, south------	0-10	4-14	0.85-1.10	0.6-2.0	0.12-0.14	0.0-2.9	2.0-6.0	0.32	0.37	4	3	86
	10-38	5-15	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	0.5-1.0	0.17	0.32			
	38-60	2-10	1.25-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
68:												
Chiwaukum-------------	0-2	4-14	0.85-1.10	0.6-2.0	0.10-0.12	0.0-2.9	2.0-6.0	0.24	0.28	4	3	86
	2-11	5-15	0.85-1.10	0.6-2.0	0.09-0.12	0.0-2.9	1.0-3.0	0.17	0.32			
	11-39	4-12	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	0.5-1.0	0.17	0.32			
	39-60	2-10	1.25-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
Chiwaukum, south------	0-10	4-14	0.85-1.10	0.6-2.0	0.12-0.14	0.0-2.9	2.0-6.0	0.32	0.37	4	3	86
	10-38	5-15	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	0.5-1.0	0.17	0.32			
	38-60	2-10	1.25-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
69:												
Chiwawa---------------	0-2	4-14	0.65-0.85	0.6-2.0	0.17-0.20	0.0-2.9	0.5-1.0	0.24	0.28	4	2	134
	2-42	5-15	0.65-0.85	0.6-2.0	0.16-0.18	0.0-2.9	3.0-5.0	0.24	0.28			
	42-60	0-3	1.45-1.65	20.0-100.0	0.04-0.10	0.0-2.9	0.0-0.5	0.02	0.17			
70:												
Choralmont, till substratum-----------	0-9	4-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	0.5-2.0	0.20	0.28	2	3	86
	9-17	4-12	0.65-0.85	2.0-6.0	0.15-0.18	0.0-2.9	0.0-0.5	0.17	0.28			
	17-33	2-6	0.50-0.75	6.0-20.0	0.13-0.17	0.0-2.9	0.0-0.5	0.10	0.17			
	33-48	0-2	0.45-0.60	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.02	---			
	48-54	0-4	0.65-0.85	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.05	0.17			
	54-60	5-15	1.30-1.65	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.24	0.28			
Choralmont------------	0-11	4-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	0.5-2.0	0.20	0.28	2	3	86
	11-17	4-12	0.65-0.85	2.0-6.0	0.15-0.18	0.0-2.9	0.0-0.5	0.17	0.28			
	17-60	0-2	0.45-0.60	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.02	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
71:												
Choralmont------------	0-11	4-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	0.5-2.0	0.20	0.28	2	3	86
	11-17	4-12	0.65-0.85	2.0-6.0	0.15-0.18	0.0-2.9	0.0-0.5	0.17	0.28			
	17-60	0-2	0.45-0.60	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.02	---			
72:												
Choralmont------------	0-11	4-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	0.5-2.0	0.20	0.28	2	3	86
	11-17	4-12	0.65-0.85	2.0-6.0	0.15-0.18	0.0-2.9	0.0-0.5	0.17	0.28			
	17-60	0-2	0.45-0.60	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.02	---			
73:												
Choralmont------------	0-9	4-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	0.5-2.0	0.20	0.28	2	3	86
	9-17	4-12	0.65-0.85	2.0-6.0	0.15-0.18	0.0-2.9	0.0-0.5	0.17	0.28			
	17-33	2-6	0.50-0.75	6.0-20.0	0.13-0.17	0.0-2.9	0.0-0.5	0.10	0.17			
	33-48	0-2	0.45-0.60	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.02	---			
	48-54	0-4	0.65-0.85	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.05	0.17			
	54-60	5-15	1.30-1.65	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.24	0.28			
74:												
Choralmont------------	0-9	4-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	0.5-2.0	0.20	0.28	2	3	86
	9-17	4-12	0.65-0.85	2.0-6.0	0.15-0.18	0.0-2.9	0.0-0.5	0.17	0.28			
	17-33	2-6	0.50-0.75	6.0-20.0	0.13-0.17	0.0-2.9	0.0-0.5	0.10	0.17			
	33-48	0-2	0.45-0.60	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.02	---			
	48-54	0-4	0.65-0.85	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.05	0.17			
	54-60	5-15	1.30-1.65	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.24	0.28			
75:												
Choralmont------------	0-11	4-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	0.5-2.0	0.20	0.28	2	3	86
	11-17	4-12	0.65-0.85	2.0-6.0	0.15-0.18	0.0-2.9	0.0-0.5	0.17	0.28			
	17-60	0-2	0.45-0.60	20.0-100.0	0.13-0.17	0.0-2.9	0.0-0.5	0.02	---			
Limking---------------	0-4	8-16	0.75-0.90	0.6-2.0	0.13-0.16	0.0-2.9	2.0-8.0	0.32	0.32	3	5	56
	4-15	6-14	0.85-1.00	2.0-6.0	0.06-0.09	0.0-2.9	1.0-2.0	0.10	0.28			
	15-38	2-5	1.35-1.55	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	38-55	0-5	1.40-1.70	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	55-59	---	---	---	---	---	---	---	---			
76:												
Chumstick-------------	0-4	2-10	1.10-1.30	2.0-6.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	1	4	86
	4-14	2-10	1.20-1.40	2.0-6.0	0.06-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	14-19	2-10	1.20-1.40	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	19-23	---	---	---	---	---	---	---	---			
77:												
Chumstick-------------	0-4	2-10	1.10-1.30	2.0-6.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	1	4	86
	4-14	2-10	1.20-1.40	2.0-6.0	0.06-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	14-19	2-10	1.20-1.40	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	19-23	---	---	---	---	---	---	---	---			
78:												
Chumstick-------------	0-4	2-10	1.10-1.30	2.0-6.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	1	4	86
	4-14	2-10	1.20-1.40	2.0-6.0	0.06-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	14-19	2-10	1.20-1.40	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	19-23	---	---	---	---	---	---	---	---			
79:												
Cle Elum--------------	0-14	10-20	1.15-1.35	0.6-2.0	0.18-0.20	0.0-2.9	1.0-4.0	0.37	0.37	3	5	56
	14-36	25-35	1.25-1.45	0.6-2.0	0.17-0.20	3.0-5.9	0.0-1.0	0.37	0.43			
	36-46	---	---	---	---	---	0.0-0.5	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
80:												
Cle Elum--------------	0-14	10-20	1.15-1.35	0.6-2.0	0.18-0.20	0.0-2.9	1.0-4.0	0.37	0.37	3	5	56
	14-36	25-35	1.25-1.45	0.6-2.0	0.17-0.20	3.0-5.9	0.0-1.0	0.37	0.43			
	36-46	---	---	---	---	---	0.0-0.5	---	---			
81:												
Coopmont--------------	0-5	4-14	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	1.0-2.0	0.24	0.28	4	4	86
	5-12	5-15	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	0.0-0.5	0.24	0.28			
	12-28	2-10	0.60-0.85	0.6-2.0	0.10-0.18	0.0-2.9	0.0-0.5	0.15	0.28			
	28-50	5-10	1.45-1.60	0.6-2.0	0.05-0.11	0.0-2.9	0.0-0.5	0.20	0.32			
	50-60	0-2	1.45-1.60	20.0-100.0	0.02-0.05	0.0-2.9	0.0-0.5	0.10	0.28			
82:												
Coopmont--------------	0-5	4-14	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	1.0-2.0	0.24	0.28	4	4	86
	5-12	5-15	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	0.0-0.5	0.24	0.28			
	12-28	2-10	0.60-0.85	0.6-2.0	0.10-0.18	0.0-2.9	0.0-0.5	0.15	0.28			
	28-50	5-10	1.45-1.60	0.6-2.0	0.05-0.11	0.0-2.9	0.0-0.5	0.20	0.32			
	50-60	0-2	1.45-1.60	20.0-100.0	0.02-0.05	0.0-2.9	0.0-0.5	0.10	0.28			
83:												
Cowiche---------------	0-10	10-20	1.15-1.30	0.6-2.0	0.17-0.19	0.0-2.9	1.0-3.0	0.43	0.43	4	5	56
	10-20	10-20	1.30-1.50	0.6-2.0	0.16-0.19	0.0-2.9	0.0-1.0	0.43	0.43			
	20-50	18-30	1.30-1.50	0.6-2.0	0.15-0.19	3.0-5.9	0.0-0.5	0.32	0.32			
	50-60	---	---	---	---	---	0.0-0.5	---	---			
Cowiche, very deep----	0-10	10-20	1.15-1.30	0.6-2.0	0.17-0.19	0.0-2.9	1.0-3.0	0.49	0.49	5	5	56
	10-25	10-20	1.30-1.50	0.6-2.0	0.16-0.19	0.0-2.9	0.0-0.5	0.49	0.49			
	25-45	18-30	1.30-1.50	0.6-2.0	0.15-0.19	3.0-5.9	0.0-0.5	0.32	0.32			
	45-60	5-20	1.30-1.50	0.6-2.0	0.12-0.14	0.0-2.9	0.0-0.5	0.28	0.32			
84:												
Cowiche---------------	0-10	10-20	1.15-1.30	0.6-2.0	0.17-0.19	0.0-2.9	1.0-3.0	0.43	0.43	4	5	56
	10-20	10-20	1.30-1.50	0.6-2.0	0.16-0.19	0.0-2.9	0.0-1.0	0.43	0.43			
	20-50	18-30	1.30-1.50	0.6-2.0	0.15-0.19	3.0-5.9	0.0-0.5	0.32	0.32			
	50-60	---	---	---	---	---	0.0-0.5	---	---			
Cowiche, very deep----	0-10	10-20	1.15-1.30	0.6-2.0	0.17-0.19	0.0-2.9	1.0-3.0	0.49	0.49	5	5	56
	10-25	10-20	1.30-1.50	0.6-2.0	0.16-0.19	0.0-2.9	0.0-0.5	0.49	0.49			
	25-45	18-30	1.30-1.50	0.6-2.0	0.15-0.19	3.0-5.9	0.0-0.5	0.32	0.32			
	45-60	5-20	1.30-1.50	0.6-2.0	0.12-0.14	0.0-2.9	0.0-0.5	0.28	0.32			
85:												
Cryomont--------------	0-5	5-10	1.20-1.40	0.6-2.0	0.10-0.11	0.0-2.9	0.0-0.5	0.10	0.28	2	3	86
	5-12	5-10	1.40-1.60	2.0-6.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.24			
	12-60	0-5	1.40-1.60	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.20			
86:												
Cryomont--------------	0-4	5-10	1.20-1.40	0.6-2.0	0.10-0.11	0.0-2.9	0.0-0.5	0.10	0.28	2	3	86
	4-12	5-10	1.40-1.60	2.0-6.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.24			
	12-60	0-5	1.40-1.60	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.20			
87:												
Cryomont--------------	0-5	5-10	1.20-1.40	0.6-2.0	0.10-0.11	0.0-2.9	0.0-0.5	0.10	0.28	2	3	86
	5-12	5-10	1.40-1.60	2.0-6.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.24			
	12-60	0-5	1.40-1.60	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.20			
Cryomont, fan---------	0-4	5-10	1.20-1.40	0.6-2.0	0.10-0.11	0.0-2.9	0.0-0.5	0.10	0.28	2	3	86
	4-12	5-10	1.40-1.60	2.0-6.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.24			
	12-60	0-5	1.40-1.60	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.20			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
88:												
Culving	0-4	15-20	1.20-1.35	0.6-2.0	0.15-0.18	0.0-2.9	1.0-2.0	0.20	0.37	2	6	48
	4-8	20-25	1.25-1.40	0.6-2.0	0.15-0.17	0.0-2.9	0.5-1.0	0.20	0.37			
	8-21	20-30	1.30-1.40	0.6-2.0	0.10-0.16	3.0-5.9	0.0-0.5	0.05	0.37			
	21-25	---	---	---	---	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
89:												
Culvop	0-10	8-16	0.85-1.10	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.28	1	7	38
	10-16	10-18	0.85-1.10	0.6-2.0	0.08-0.12	0.0-2.9	0.5-1.0	0.10	0.28			
	16-20	---	---	---	---	---	---	---	---			
90:												
Devore	0-2	5-10	0.80-0.95	0.6-2.0	0.08-0.10	0.0-2.9	0.5-2.0	0.20	0.28	2	5	56
	2-25	5-10	1.30-1.40	0.6-2.0	0.05-0.08	0.0-2.9	0.5-1.0	0.20	0.28			
	25-29	---	---	---	---	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
91:												
Dinkelman	0-15	5-12	1.20-1.40	0.6-2.0	0.12-0.14	0.0-2.9	1.0-2.0	0.17	0.28	4	4	86
	15-42	8-12	1.35-1.45	0.6-2.0	0.10-0.13	0.0-2.9	0.0-1.0	0.20	0.32			
	42-52	---	---	---	---	---	---	---	---			
92:												
Dinkelman	0-15	5-12	1.20-1.40	0.6-2.0	0.12-0.14	0.0-2.9	1.0-2.0	0.17	0.28	4	4	86
	15-42	8-12	1.35-1.45	0.6-2.0	0.10-0.13	0.0-2.9	0.0-1.0	0.20	0.32			
	42-52	---	---	---	---	---	---	---	---			
93:												
Dinkelman	0-15	5-12	1.20-1.40	0.6-2.0	0.12-0.14	0.0-2.9	1.0-2.0	0.17	0.28	4	4	86
	15-42	8-12	1.35-1.45	0.6-2.0	0.10-0.13	0.0-2.9	0.0-1.0	0.20	0.32			
	42-52	---	---	---	---	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
94:												
Dinkels	0-10	7-15	1.20-1.40	0.6-2.0	0.15-0.20	0.0-2.9	1.0-3.0	0.37	0.37	3	3	86
	10-56	5-15	1.25-1.45	0.6-2.0	0.10-0.15	0.0-2.9	0.0-1.0	0.20	0.37			
	56-60	---	---	---	---	---	---	---	---			
95:												
Dinkels	0-10	7-15	1.20-1.40	0.6-2.0	0.15-0.20	0.0-2.9	1.0-3.0	0.37	0.37	3	3	86
	10-56	5-15	1.25-1.45	0.6-2.0	0.10-0.15	0.0-2.9	0.0-1.0	0.20	0.37			
	56-60	---	---	---	---	---	---	---	---			
96:												
Dinkels	0-11	7-15	1.20-1.40	0.6-2.0	0.10-0.15	0.0-2.9	1.0-3.0	0.15	0.28	3	4	86
	11-22	5-15	1.25-1.45	0.6-2.0	0.10-0.15	0.0-2.9	0.0-1.0	0.20	0.37			
	22-59	2-10	1.40-1.60	2.0-6.0	0.07-0.10	0.0-2.9	0.0-0.5	0.15	0.17			
	59-63	---	---	---	---	---	---	---	---			
97:												
Domkey	0-3	6-14	0.65-0.85	0.6-2.0	0.10-0.14	0.0-2.9	1.0-2.0	0.20	0.24	4	3	86
	3-10	5-15	0.65-0.85	0.6-2.0	0.12-0.14	0.0-2.9	0.5-1.0	0.24	0.24			
	10-18	5-15	0.65-0.85	0.6-2.0	0.11-0.13	0.0-2.9	0.0-0.5	0.24	0.28			
	18-35	5-10	0.65-0.85	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.32	0.32			
	35-45	5-10	1.30-1.50	2.0-6.0	0.05-0.06	0.0-2.9	0.0-0.5	0.10	0.28			
	45-55	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
98:												
Domkey----------------	0-3	6-14	0.65-0.85	0.6-2.0	0.10-0.14	0.0-2.9	1.0-2.0	0.20	0.24	4	3	86
	3-10	5-15	0.65-0.85	0.6-2.0	0.12-0.14	0.0-2.9	0.5-1.0	0.24	0.24			
	10-18	5-15	0.65-0.85	0.6-2.0	0.11-0.13	0.0-2.9	0.0-0.5	0.24	0.28			
	18-35	5-10	0.65-0.85	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.32	0.32			
	35-45	5-10	1.30-1.50	2.0-6.0	0.05-0.06	0.0-2.9	0.0-0.5	0.10	0.28			
	45-55	---	---	---	---	---	---	---	---			
99:												
Domkey----------------	0-3	6-14	0.65-0.85	0.6-2.0	0.10-0.14	0.0-2.9	1.0-2.0	0.20	0.24	4	3	86
	3-10	5-15	0.65-0.85	0.6-2.0	0.12-0.14	0.0-2.9	0.5-1.0	0.24	0.24			
	10-18	5-15	0.65-0.85	0.6-2.0	0.11-0.13	0.0-2.9	0.0-0.5	0.24	0.28			
	18-35	5-10	0.65-0.85	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.32	0.32			
	35-45	5-10	1.30-1.50	2.0-6.0	0.05-0.06	0.0-2.9	0.0-0.5	0.10	0.28			
	45-55	---	---	---	---	---	---	---	---			
McCree----------------	0-5	5-14	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	5-19	5-15	0.80-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-56	6-12	1.30-1.40	0.6-2.0	0.03-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	56-60	---	---	---	---	---	---	---	---			
100:												
Dragoon---------------	0-8	5-10	1.20-1.40	0.6-2.0	0.12-0.16	0.0-2.9	3.0-4.0	0.37	0.37	3	3	86
	8-24	20-30	1.35-1.50	0.6-2.0	0.19-0.21	3.0-5.9	0.0-1.0	0.37	0.37			
	24-34	---	---	---	---	---	---	---	---			
101:												
Dragoon---------------	0-10	10-15	1.20-1.35	0.6-2.0	0.19-0.21	0.0-2.9	3.0-4.0	0.43	0.43	3	5	56
	10-27	20-30	1.35-1.50	0.6-2.0	0.19-0.21	3.0-5.9	0.0-1.0	0.37	0.37			
	27-37	---	---	---	---	---	---	---	---			
102:												
Entiat----------------	0-4	6-10	1.15-1.35	2.0-6.0	0.10-0.12	0.0-2.9	1.0-2.0	0.20	0.37	2	4	86
	4-10	8-14	1.25-1.50	2.0-6.0	0.12-0.14	0.0-2.9	0.0-1.0	0.17	0.32			
	10-15	8-14	1.25-1.50	2.0-6.0	0.07-0.08	0.0-2.9	0.0-0.5	0.15	0.32			
	15-25	---	---	---	---	---	---	---	---			
103:												
Entiat----------------	0-4	6-10	1.15-1.35	2.0-6.0	0.10-0.12	0.0-2.9	1.0-2.0	0.20	0.37	2	4	86
	4-10	8-14	1.25-1.50	2.0-6.0	0.12-0.14	0.0-2.9	0.0-1.0	0.17	0.32			
	10-15	8-14	1.25-1.50	2.0-6.0	0.07-0.08	0.0-2.9	0.0-0.5	0.15	0.32			
	15-25	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
104:												
Entic Haplumbrepts----	0-3	9-11	1.00-1.20	0.6-2.0	0.07-0.08	0.0-2.9	1.0-2.0	0.10	0.28	5	6	48
	3-19	9-11	1.30-1.50	0.6-2.0	0.04-0.05	0.0-2.9	0.5-1.0	0.05	0.32			
	19-60	0-2	1.40-1.60	20.0-100.0	0.01-0.02	0.0-2.9	0.0-0.5	0.02	0.32			
105:												
Esmeralda-------------	0-4	6-14	0.60-0.90	2.0-6.0	0.07-0.08	0.0-2.9	2.0-10	0.10	0.28	5	3	86
	4-12	6-16	0.60-0.90	2.0-6.0	0.10-0.14	0.0-2.9	0.5-1.0	0.10	0.28			
	12-35	8-16	0.85-1.10	2.0-6.0	0.06-0.10	0.0-2.9	0.0-0.5	0.10	0.32			
	35-60	6-14	1.00-1.40	6.0-20.0	0.04-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
106:												
Esmeralda-------------	0-4	6-14	0.60-0.90	2.0-6.0	0.07-0.08	0.0-2.9	2.0-10	0.10	0.28	5	3	86
	4-12	6-16	0.60-0.90	2.0-6.0	0.10-0.14	0.0-2.9	0.5-1.0	0.10	0.28			
	12-35	8-16	0.85-1.10	2.0-6.0	0.06-0.10	0.0-2.9	0.0-0.5	0.10	0.32			
	35-60	6-14	1.00-1.40	6.0-20.0	0.04-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
107:												
Fears-----------------	0-2	6-14	0.85-1.10	0.6-2.0	0.11-0.13	0.0-2.9	3.0-10	0.15	0.28	5	3	86
	2-10	5-15	0.85-1.10	0.6-2.0	0.12-0.14	0.0-2.9	0.5-1.0	0.24	0.28			
	10-20	5-15	0.85-1.10	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.20	0.32			
	20-32	4-10	0.90-1.15	0.6-2.0	0.04-0.06	0.0-2.9	0.0-0.5	0.02	0.32			
	32-60	0-6	1.00-1.30	2.0-6.0	0.03-0.06	0.0-2.9	0.0-0.5	0.02	0.32			
108:												
Fears-----------------	0-2	6-14	0.85-1.10	0.6-2.0	0.11-0.13	0.0-2.9	3.0-10	0.15	0.28	5	3	86
	2-10	5-15	0.85-1.10	0.6-2.0	0.12-0.14	0.0-2.9	0.5-1.0	0.24	0.28			
	10-20	5-15	0.85-1.10	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.20	0.32			
	20-32	4-10	0.90-1.15	0.6-2.0	0.04-0.06	0.0-2.9	0.0-0.5	0.02	0.32			
	32-60	0-6	1.00-1.30	2.0-6.0	0.03-0.06	0.0-2.9	0.0-0.5	0.02	0.32			
Devore----------------	0-2	5-10	0.80-0.95	0.6-2.0	0.08-0.10	0.0-2.9	0.5-2.0	0.20	0.28	2	5	56
	2-25	5-10	1.30-1.40	0.6-2.0	0.05-0.08	0.0-2.9	0.5-1.0	0.20	0.28			
	25-29	---	---	---	---	---	---	---	---			
109:												
Fernow----------------	0-5	10-16	0.60-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-6.0	0.28	0.28	4	5	56
	5-27	5-15	0.60-0.85	0.6-2.0	0.11-0.16	0.0-2.9	2.0-5.0	0.28	0.32			
	27-46	5-15	0.60-0.85	2.0-6.0	0.05-0.10	0.0-2.9	1.0-2.0	0.05	0.32			
	46-60	0-2	0.60-0.85	20.0-100.0	0.02-0.05	0.0-2.9	0.0-1.0	0.02	---			
110:												
Fernow----------------	0-5	10-16	0.60-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-6.0	0.28	0.28	4	5	56
	5-27	5-15	0.60-0.85	0.6-2.0	0.11-0.16	0.0-2.9	2.0-5.0	0.28	0.32			
	27-46	5-15	0.60-0.85	2.0-6.0	0.05-0.10	0.0-2.9	1.0-2.0	0.05	0.32			
	46-60	0-2	0.60-0.85	20.0-100.0	0.02-0.05	0.0-2.9	0.0-1.0	0.02	---			
111:												
Fernow----------------	0-5	10-16	0.60-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-6.0	0.28	0.28	4	5	56
	5-27	5-15	0.60-0.85	0.6-2.0	0.11-0.16	0.0-2.9	2.0-5.0	0.28	0.32			
	27-46	5-15	0.60-0.85	2.0-6.0	0.05-0.10	0.0-2.9	1.0-2.0	0.05	0.32			
	46-60	0-2	0.60-0.85	20.0-100.0	0.02-0.05	0.0-2.9	0.0-1.0	0.02	---			
Serene----------------	0-4	5-10	0.70-0.95	0.6-2.0	0.10-0.12	0.0-2.9	6.0-10	0.15	0.24	2	4	86
	4-8	5-10	0.75-1.00	0.6-2.0	0.08-0.10	0.0-2.9	0.5-1.0	0.10	0.24			
	8-13	2-10	0.85-1.00	0.6-2.0	0.05-0.10	0.0-2.9	0.0-0.5	0.10	0.24			
	13-24	0-2	1.35-1.65	6.0-20.0	0.04-0.05	0.0-2.9	0.0-0.5	0.02	0.28			
	24-34	---	---	---	---	---	---	---	---			
112:												
Fluvaquents-----------	0-16	15-20	1.15-1.35	0.6-2.0	0.19-0.21	0.0-2.9	2.0-3.0	0.43	0.43	5	5	56
	16-23	5-10	1.50-1.60	2.0-6.0	0.09-0.11	0.0-2.9	0.5-1.0	0.15	0.15			
	23-29	0-5	1.50-1.60	6.0-20.0	0.05-0.07	0.0-2.9	0.0-0.5	0.05	0.05			
	29-60	5-10	1.50-1.60	0.6-6.0	0.05-0.17	0.0-2.9	0.0-0.5	0.10	0.10			
113:												
Georgecreek-----------	0-10	10-15	1.45-1.60	0.6-2.0	0.14-0.16	0.0-2.9	2.0-3.0	0.32	0.37	4	3	86
	10-42	20-35	1.45-1.65	0.6-2.0	0.12-0.15	3.0-5.9	0.5-1.0	0.32	0.37			
	42-52	---	---	---	---	---	---	---	---			
114:												
Georgecreek-----------	0-10	10-15	1.45-1.60	0.6-2.0	0.14-0.16	0.0-2.9	2.0-3.0	0.32	0.37	4	3	86
	10-42	20-35	1.45-1.65	0.6-2.0	0.12-0.15	3.0-5.9	0.5-1.0	0.32	0.37			
	42-52	---	---	---	---	---	---	---	---			
115:												
Georgecreek-----------	0-10	10-15	1.45-1.60	0.6-2.0	0.14-0.16	0.0-2.9	2.0-3.0	0.32	0.37	4	3	86
	10-42	20-35	1.45-1.65	0.6-2.0	0.12-0.15	3.0-5.9	0.5-1.0	0.32	0.37			
	42-52	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
116:												
Georgecreek-----------	0-10	10-15	1.45-1.60	0.6-2.0	0.14-0.16	0.0-2.9	2.0-3.0	0.32	0.37	4	3	86
	10-42	20-35	1.45-1.65	0.6-2.0	0.12-0.15	3.0-5.9	0.5-1.0	0.32	0.37			
	42-52	---	---	---	---	---	---	---	---			
Dragoon---------------	0-8	5-10	1.20-1.40	0.6-2.0	0.12-0.16	0.0-2.9	3.0-4.0	0.37	0.37	3	3	86
	8-24	20-30	1.35-1.50	0.6-2.0	0.19-0.21	3.0-5.9	0.0-1.0	0.37	0.37			
	24-34	---	---	---	---	---	---	---	---			
117:												
Georgecreek-----------	0-6	10-15	1.45-1.60	0.6-2.0	0.14-0.16	0.0-2.9	2.0-3.0	0.32	0.37	4	3	86
	6-19	13-23	1.40-1.60	0.6-2.0	0.14-0.19	0.0-2.9	1.0-2.0	0.43	0.43			
	19-53	20-35	1.45-1.65	0.6-2.0	0.12-0.15	3.0-5.9	0.5-1.0	0.32	0.37			
	53-63	---	---	---	---	---	---	---	---			
Dragoon---------------	0-8	5-10	1.20-1.40	0.6-2.0	0.12-0.16	0.0-2.9	3.0-4.0	0.37	0.37	3	3	86
	8-24	20-30	1.35-1.50	0.6-2.0	0.19-0.21	3.0-5.9	0.0-1.0	0.37	0.37			
	24-34	---	---	---	---	---	---	---	---			
118:												
Gilpar----------------	0-6	5-10	0.60-1.10	0.6-2.0	0.09-0.10	0.0-2.9	3.0-8.0	0.15	0.28	5	5	56
	6-28	5-10	0.70-1.10	0.6-2.0	0.08-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	28-60	5-10	0.85-1.20	0.6-2.0	0.07-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
119:												
Gilpar----------------	0-6	5-10	0.60-1.10	0.6-2.0	0.09-0.10	0.0-2.9	3.0-8.0	0.15	0.28	5	5	56
	6-28	5-10	0.70-1.10	0.6-2.0	0.08-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	28-60	5-10	0.85-1.20	0.6-2.0	0.07-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
Nimue-----------------	0-7	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	4	86
	7-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
120:												
Gilpar----------------	0-6	5-10	0.60-1.10	0.6-2.0	0.09-0.10	0.0-2.9	3.0-8.0	0.15	0.28	5	5	56
	6-28	5-10	0.70-1.10	0.6-2.0	0.08-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	28-60	5-10	0.85-1.20	0.6-2.0	0.07-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
Nimue-----------------	0-2	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	4	86
	2-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
121:												
Gilpar----------------	0-6	5-10	0.60-1.10	0.6-2.0	0.09-0.10	0.0-2.9	3.0-8.0	0.15	0.28	5	5	56
	6-28	5-10	0.70-1.10	0.6-2.0	0.08-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	28-60	5-10	0.85-1.20	0.6-2.0	0.07-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
122:												
Glaciers, snowfields--	0-60	---	---	---	---	---	---	---	---			
123:												
Goffpeak--------------	0-13	5-10	0.60-0.85	0.6-2.0	0.11-0.14	0.0-2.9	3.0-6.0	0.24	0.28	3	4	86
	13-26	2-10	0.60-0.85	0.6-2.0	0.11-0.14	0.0-2.9	0.5-1.0	0.24	0.28			
	26-42	5-10	0.60-1.10	2.0-6.0	0.11-0.14	0.0-2.9	0.0-0.5	0.10	0.32			
	42-46	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
124:												
Goffpeak--------------	0-13	5-10	0.60-0.85	0.6-2.0	0.11-0.14	0.0-2.9	3.0-6.0	0.24	0.28	3	4	86
	13-26	2-10	0.60-0.85	0.6-2.0	0.11-0.14	0.0-2.9	0.5-1.0	0.24	0.28			
	26-42	5-10	0.60-1.10	2.0-6.0	0.11-0.14	0.0-2.9	0.0-0.5	0.10	0.32			
	42-46	---	---	---	---	---	---	---	---			
Fears-----------------	0-2	6-14	0.85-1.10	0.6-2.0	0.11-0.13	0.0-2.9	3.0-10	0.15	0.28	5	3	86
	2-10	5-15	0.85-1.10	0.6-2.0	0.12-0.14	0.0-2.9	0.5-1.0	0.24	0.28			
	10-20	5-15	0.85-1.10	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.20	0.32			
	20-32	4-10	0.90-1.15	0.6-2.0	0.04-0.06	0.0-2.9	0.0-0.5	0.02	0.32			
	32-60	0-6	1.00-1.30	2.0-6.0	0.03-0.06	0.0-2.9	0.0-0.5	0.02	0.32			
125:												
Haplocryods, cold-----	0-4	10-15	0.80-1.00	0.6-6.0	0.16-0.18	0.0-2.9	3.0-4.0	0.43	0.43	2	5	56
	4-10	8-15	1.20-1.40	0.6-6.0	0.10-0.17	0.0-2.9	0.5-1.0	0.24	0.43			
	10-15	8-15	1.30-1.45	0.6-6.0	0.06-0.12	0.0-2.9	0.0-0.5	0.15	0.37			
	15-25	5-10	1.30-1.45	0.6-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.10	0.37			
	25-29	---	---	---	---	---	---	---	---			
Haplocryods, stony----	0-3	8-12	0.75-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-4.0	0.32	0.32	5	5	86
	3-32	8-12	1.30-1.40	0.6-2.0	0.10-0.15	0.0-2.9	1.0-3.0	0.37	0.37			
	32-60	8-15	1.30-1.40	0.6-2.0	0.04-0.10	0.0-2.9	0.0-1.0	0.05	0.37			
126:												
Haplocryods-----------	0-6	10-15	0.75-1.00	0.6-6.0	0.14-0.16	0.0-2.9	3.0-8.0	0.37	0.37	3	5	56
	6-15	8-15	1.30-1.45	0.6-6.0	0.08-0.13	0.0-2.9	0.5-1.0	0.20	0.37			
	15-29	8-15	1.30-1.45	0.6-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.10	0.43			
	29-52	8-15	1.30-1.45	0.6-6.0	0.04-0.09	0.0-2.9	0.0-0.5	0.10	0.43			
	52-56	---	---	---	---	---	---	---	---			
Andic Cryochrepts-----	0-4	10-20	0.85-0.95	0.6-2.0	0.10-0.14	0.0-2.9	1.0-3.0	0.10	0.28	5	8	0
	4-10	8-20	0.85-0.95	0.6-2.0	0.10-0.14	0.0-2.9	1.0-2.0	0.15	0.32			
	10-60	5-22	1.25-1.45	0.6-2.0	0.08-0.14	0.0-2.9	0.0-0.5	0.15	0.32			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
127:												
Haploxerolls----------	0-10	10-15	1.10-1.30	0.6-2.0	0.12-0.14	0.0-2.9	2.0-5.0	0.10	0.32	5	5	56
	10-26	12-20	1.25-1.45	0.6-2.0	0.06-0.13	0.0-2.9	0.5-1.0	0.10	0.32			
	26-60	10-20	1.25-1.60	2.0-20.0	0.03-0.10	0.0-2.9	0.0-0.5	0.05	0.37			
128:												
Haploxerolls----------	0-10	10-15	1.10-1.30	0.6-2.0	0.12-0.14	0.0-2.9	2.0-5.0	0.10	0.32	5	5	56
	10-26	12-20	1.25-1.45	0.6-2.0	0.06-0.13	0.0-2.9	0.5-1.0	0.10	0.32			
	26-60	10-20	1.25-1.60	2.0-20.0	0.03-0.10	0.0-2.9	0.0-0.5	0.05	0.37			
129:												
Humicryods------------	0-2	5-10	1.10-1.25	2.0-6.0	0.05-0.07	0.0-2.9	6.0-10	0.20	0.24	4	2	134
	2-10	5-10	1.10-1.30	0.6-2.0	0.10-0.12	0.0-2.9	3.0-5.0	0.15	0.24			
	10-20	5-10	1.20-1.40	0.6-2.0	0.07-0.11	0.0-2.9	1.0-3.0	0.15	0.32			
	20-39	5-10	1.30-1.50	2.0-6.0	0.04-0.08	0.0-2.9	0.0-1.0	0.05	0.32			
	39-49	---	---	---	---	---	0.0-0.5	---	---			
Andic Cryumbrepts-----	0-4	5-10	0.65-0.85	0.6-2.0	0.07-0.08	0.0-2.9	3.0-4.0	0.10	0.28	5	3	86
	4-10	6-12	0.85-0.95	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.15	0.32			
	10-60	6-12	0.85-1.50	0.6-2.0	0.04-0.08	0.0-2.9	1.0-2.0	0.10	0.32			
130:												
Humicryods------------	0-2	5-10	1.10-1.25	2.0-6.0	0.05-0.07	0.0-2.9	6.0-10	0.20	0.24	4	2	134
	2-10	5-10	1.10-1.30	0.6-2.0	0.10-0.12	0.0-2.9	3.0-5.0	0.15	0.24			
	10-20	5-10	1.20-1.40	0.6-2.0	0.07-0.11	0.0-2.9	1.0-3.0	0.15	0.32			
	20-39	5-10	1.30-1.50	2.0-6.0	0.04-0.08	0.0-2.9	0.0-1.0	0.05	0.32			
	39-49	---	---	---	---	---	0.0-0.5	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
130:												
Andic Cryochrepts-----	0-4	10-20	0.85-0.95	0.6-2.0	0.10-0.14	0.0-2.9	1.0-3.0	0.10	0.28	5	8	0
	4-10	8-20	0.85-0.95	0.6-2.0	0.10-0.14	0.0-2.9	1.0-2.0	0.15	0.32			
	10-60	5-22	1.25-1.45	0.6-2.0	0.08-0.14	0.0-2.9	0.0-0.5	0.15	0.32			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
131:												
Humicryods------------	0-2	5-10	1.10-1.25	2.0-6.0	0.05-0.07	0.0-2.9	6.0-10	0.20	0.24	4	2	134
	2-10	5-10	1.10-1.30	0.6-2.0	0.10-0.12	0.0-2.9	3.0-5.0	0.15	0.24			
	10-20	5-10	1.20-1.40	0.6-2.0	0.07-0.11	0.0-2.9	1.0-3.0	0.15	0.32			
	20-39	5-10	1.30-1.50	2.0-6.0	0.04-0.08	0.0-2.9	0.0-1.0	0.05	0.32			
	39-49	---	---	---	---	---	0.0-0.5	---	---			
Andic Cryumbrepts-----	0-10	5-10	0.70-0.85	2.0-6.0	0.09-0.12	0.0-2.9	2.0-3.0	0.28	0.28	3	3	86
	10-16	6-16	0.85-0.95	2.0-6.0	0.08-0.11	0.0-2.9	2.0-3.0	0.20	0.28			
	16-33	1-5	1.10-1.25	2.0-6.0	0.06-0.09	0.0-2.9	1.0-2.0	0.10	0.28			
	33-51	1-5	1.10-1.40	2.0-6.0	0.04-0.07	0.0-2.9	0.0-1.0	0.05	0.28			
	51-55	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
132:												
Hyprairie-------------	0-22	10-20	1.15-1.30	0.6-2.0	0.19-0.21	0.0-2.9	3.0-5.0	0.43	0.43	5	5	56
	22-60	27-35	1.20-1.40	0.2-0.6	0.18-0.20	3.0-5.9	0.5-1.0	0.37	0.43			
133:												
Hyprairie-------------	0-22	10-20	1.15-1.30	0.6-2.0	0.19-0.21	0.0-2.9	3.0-5.0	0.43	0.43	5	5	56
	22-60	27-35	1.20-1.40	0.2-0.6	0.18-0.20	3.0-5.9	0.5-1.0	0.37	0.43			
134:												
Hyprairie-------------	0-22	10-20	1.15-1.30	0.6-2.0	0.19-0.21	0.0-2.9	3.0-5.0	0.43	0.43	5	5	56
	22-60	27-35	1.20-1.40	0.2-0.6	0.18-0.20	3.0-5.9	0.5-1.0	0.37	0.43			
Oldbutte--------------	0-17	10-20	1.25-1.40	0.6-2.0	0.22-0.24	0.0-2.9	3.0-5.0	0.32	0.32	5	5	56
	17-36	28-35	1.35-1.60	0.2-0.6	0.16-0.19	3.0-5.9	0.5-1.0	0.32	0.32			
	36-60	20-30	1.45-1.60	0.6-2.0	0.14-0.17	0.0-2.9	0.0-0.5	0.32	0.32			
135:												
Icicle, south---------	0-5	5-10	1.25-1.45	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.20	0.28	5	4	86
	5-24	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	24-60	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
Icicle----------------	0-5	5-10	1.25-1.45	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	5	5	56
	5-20	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	20-60	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
136:												
Icicle----------------	0-5	5-10	1.25-1.45	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.20	0.28	5	4	86
	5-24	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	24-60	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
137:												
Icicle----------------	0-5	5-10	1.25-1.45	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	5	5	56
	5-20	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	20-60	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
138:												
Icicle----------------	0-5	5-10	1.25-1.45	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	5	5	56
	5-20	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	20-60	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
139:												
Icicle----------------	0-5	5-10	1.20-1.40	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.20	0.32	5	4	86
	5-30	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	30-60	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
140:												
Icicle----------------	0-8	5-10	1.40-1.50	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.10	0.28	3	5	56
	8-28	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	28-50	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
	50-54	---	---	---	---	---	---	---	---			
Chumstick-------------	0-4	2-10	1.10-1.30	2.0-6.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	1	4	86
	4-14	2-10	1.20-1.40	2.0-6.0	0.06-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	14-19	2-10	1.20-1.40	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	19-23	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
141:												
Icicle----------------	0-8	5-10	1.40-1.50	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.10	0.28	3	5	56
	8-28	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	28-50	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
	50-54	---	---	---	---	---	---	---	---			
Chumstick-------------	0-4	2-10	1.10-1.30	2.0-6.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	1	4	86
	4-14	2-10	1.20-1.40	2.0-6.0	0.06-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	14-19	2-10	1.20-1.40	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	19-23	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
142:												
Inkler----------------	0-4	5-10	0.65-0.85	0.6-2.0	0.08-0.10	0.0-2.9	1.0-2.0	0.17	0.32	2	3	86
	4-10	5-15	1.45-1.55	0.6-2.0	0.06-0.11	0.0-2.9	0.5-1.0	0.10	0.37			
	10-29	5-15	1.45-1.55	6.0-20.0	0.03-0.10	0.0-2.9	0.0-0.5	0.05	0.37			
	29-44	0-10	1.55-1.65	6.0-20.0	0.02-0.07	0.0-2.9	0.0-0.5	0.02	0.28			
	44-48	---	---	---	---	---	---	---	---			
143:												
Isella----------------	0-6	10-16	0.60-0.85	0.6-2.0	0.18-0.25	0.0-2.9	6.0-10	0.32	0.32	5	5	56
	6-20	8-16	0.60-0.85	0.6-2.0	0.15-0.20	0.0-2.9	0.5-1.0	0.32	0.32			
	20-50	8-16	0.60-1.00	0.6-2.0	0.13-0.18	0.0-2.9	0.0-0.5	0.32	0.37			
	50-60	8-16	0.60-1.00	0.6-2.0	0.10-0.14	0.0-2.9	0.0-0.5	0.24	0.37			
Fernow----------------	0-5	10-16	0.60-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-6.0	0.28	0.28	4	5	56
	5-27	5-15	0.60-0.85	0.6-2.0	0.11-0.16	0.0-2.9	2.0-5.0	0.28	0.32			
	27-46	5-15	0.60-0.85	2.0-6.0	0.05-0.10	0.0-2.9	1.0-2.0	0.05	0.32			
	46-60	0-2	0.60-0.85	20.0-100.0	0.02-0.05	0.0-2.9	0.0-1.0	0.02	---			
144:												
Isella----------------	0-6	10-16	0.60-0.85	0.6-2.0	0.18-0.25	0.0-2.9	6.0-10	0.32	0.32	5	5	56
	6-20	8-16	0.60-0.85	0.6-2.0	0.15-0.20	0.0-2.9	0.5-1.0	0.32	0.32			
	20-50	8-16	0.60-1.00	0.6-2.0	0.13-0.18	0.0-2.9	0.0-0.5	0.32	0.37			
	50-60	8-16	0.60-1.00	0.6-2.0	0.10-0.14	0.0-2.9	0.0-0.5	0.24	0.37			
Fernow----------------	0-5	10-16	0.60-0.85	0.6-2.0	0.16-0.20	0.0-2.9	3.0-6.0	0.28	0.28	4	5	56
	5-27	5-15	0.60-0.85	0.6-2.0	0.11-0.16	0.0-2.9	2.0-5.0	0.28	0.32			
	27-46	5-15	0.60-0.85	2.0-6.0	0.05-0.10	0.0-2.9	1.0-2.0	0.05	0.32			
	46-60	0-2	0.60-0.85	20.0-100.0	0.02-0.05	0.0-2.9	0.0-1.0	0.02	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
145:												
Isella----------------	0-2	10-16	0.60-0.85	0.6-2.0	0.18-0.25	0.0-2.9	6.0-10	0.32	0.32	5	5	56
	2-24	8-16	0.60-0.85	0.6-2.0	0.15-0.20	0.0-2.9	0.5-1.0	0.32	0.32			
	24-60	8-16	0.60-1.00	0.6-2.0	0.13-0.18	0.0-2.9	0.0-0.5	0.32	0.37			
Nimue-----------------	0-7	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	4	86
	7-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
146:												
Isella----------------	0-2	10-16	0.60-0.85	0.6-2.0	0.18-0.25	0.0-2.9	6.0-10	0.32	0.32	5	5	56
	2-24	8-16	0.60-0.85	0.6-2.0	0.15-0.20	0.0-2.9	0.5-1.0	0.32	0.32			
	24-60	8-16	0.60-1.00	0.6-2.0	0.13-0.18	0.0-2.9	0.0-0.5	0.32	0.37			
Nimue-----------------	0-2	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	3	86
	2-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
147:												
Kingmont--------------	0-14	15-20	1.20-1.30	0.6-2.0	0.15-0.17	0.0-2.9	1.0-3.0	0.20	0.28	5	6	48
	14-28	15-20	1.30-1.40	0.6-2.0	0.11-0.13	0.0-2.9	0.0-1.0	0.10	0.32			
	28-60	35-40	1.10-1.20	0.2-0.6	0.13-0.15	3.0-5.9	0.0-0.5	0.05	0.28			
148:												
Kladnick--------------	0-14	5-10	0.85-1.00	2.0-6.0	0.08-0.10	0.0-2.9	1.0-3.0	0.20	0.28	5	4	86
	14-21	0-5	1.00-1.35	6.0-20.0	0.05-0.08	0.0-2.9	0.5-1.0	0.10	0.24			
	21-60	0-5	1.30-1.55	20.0-100.0	0.03-0.05	0.0-2.9	0.0-0.5	0.02	0.20			
149:												
Kladnick--------------	0-8	5-10	0.85-1.00	2.0-6.0	0.09-0.12	0.0-2.9	1.0-3.0	0.17	0.24	5	4	86
	8-19	0-5	1.00-1.35	6.0-20.0	0.05-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-60	0-5	1.30-1.55	20.0-100.0	0.03-0.05	0.0-2.9	0.0-0.5	0.02	0.24			
150:												
Kladnick--------------	0-6	5-10	0.85-1.00	2.0-6.0	0.07-0.10	0.0-2.9	1.0-3.0	0.10	0.24	5	5	56
	6-11	0-5	1.00-1.35	6.0-20.0	0.05-0.08	0.0-2.9	0.5-1.0	0.10	0.24			
	11-60	0-5	1.30-1.55	20.0-100.0	0.03-0.05	0.0-2.9	0.0-0.5	0.02	0.20			
151:												
Klapatche-------------	0-4	2-8	0.60-0.85	2.0-6.0	0.06-0.08	0.0-2.9	6.0-10	0.10	0.17	3	2	134
	4-12	2-10	0.60-1.00	2.0-6.0	0.09-0.11	0.0-2.9	3.0-5.0	0.24	0.28			
	12-26	0-8	1.00-1.30	20.0-100.0	0.03-0.05	0.0-2.9	0.5-1.0	0.05	0.20			
	26-37	0-6	1.20-1.50	20.0-100.0	0.01-0.02	0.0-2.9	0.5-1.0	0.02	0.20			
	37-47	---	---	---	---	---	---	---	---			
Altapeak--------------	0-13	5-15	0.75-1.10	2.0-6.0	0.08-0.11	0.0-2.9	5.0-10	0.15	0.24	3	4	86
	13-29	2-10	0.85-1.20	2.0-6.0	0.03-0.07	0.0-2.9	1.0-3.0	0.05	0.28			
	29-54	2-6	0.95-1.40	6.0-20.0	0.02-0.04	0.0-2.9	0.5-1.0	0.02	0.20			
	54-64	---	---	---	---	---	---	---	---			
152:												
Kloochman-------------	0-3	5-10	0.75-0.95	0.6-2.0	0.16-0.18	0.0-2.9	1.0-3.0	0.20	0.28	2	4	86
	3-18	5-10	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.17	0.32			
	18-34	3-9	0.50-1.00	2.0-6.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.32			
	34-38	---	---	---	---	---	---	---	---			
153:												
Kloochman-------------	0-3	5-10	0.75-0.95	0.6-2.0	0.16-0.18	0.0-2.9	1.0-3.0	0.20	0.28	2	4	86
	3-18	5-10	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.17	0.32			
	18-34	3-9	0.50-1.00	2.0-6.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.32			
	34-38	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
154:												
Kloochman-------------	0-3	5-10	0.75-0.95	0.6-2.0	0.16-0.18	0.0-2.9	1.0-3.0	0.20	0.28	2	4	86
	3-18	5-10	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.17	0.32			
	18-34	3-9	0.50-1.00	2.0-6.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.32			
	34-38	---	---	---	---	---	---	---	---			
155:												
Kloochman-------------	0-3	5-10	0.75-0.95	0.6-2.0	0.16-0.18	0.0-2.9	1.0-3.0	0.20	0.28	2	4	86
	3-18	5-10	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.17	0.32			
	18-34	3-9	0.50-1.00	2.0-6.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.32			
	34-38	---	---	---	---	---	---	---	---			
Inkler----------------	0-4	5-10	0.65-0.85	0.6-2.0	0.08-0.10	0.0-2.9	1.0-2.0	0.17	0.32	2	3	86
	4-10	5-15	1.45-1.55	0.6-2.0	0.06-0.11	0.0-2.9	0.5-1.0	0.10	0.37			
	10-29	5-15	1.45-1.55	6.0-20.0	0.03-0.10	0.0-2.9	0.0-0.5	0.05	0.37			
	29-44	0-10	1.55-1.65	6.0-20.0	0.02-0.07	0.0-2.9	0.0-0.5	0.02	0.28			
	44-48	---	---	---	---	---	---	---	---			
156:												
Kloochman-------------	0-3	5-10	0.75-0.95	0.6-2.0	0.16-0.18	0.0-2.9	1.0-3.0	0.20	0.28	2	4	86
	3-18	5-10	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.17	0.32			
	18-36	3-9	0.50-1.00	2.0-6.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.32			
	36-38	---	---	---	---	---	---	---	---			
Inkler----------------	0-4	5-10	0.65-0.85	0.6-2.0	0.08-0.10	0.0-2.9	1.0-2.0	0.17	0.32	2	3	86
	4-10	5-15	1.45-1.55	0.6-2.0	0.06-0.11	0.0-2.9	0.5-1.0	0.10	0.37			
	10-29	5-15	1.45-1.55	6.0-20.0	0.03-0.10	0.0-2.9	0.0-0.5	0.05	0.37			
	29-44	0-10	1.55-1.65	6.0-20.0	0.02-0.07	0.0-2.9	0.0-0.5	0.02	0.28			
	44-48	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
157:												
Kloochman-------------	0-3	5-10	0.75-0.95	0.6-2.0	0.16-0.18	0.0-2.9	1.0-3.0	0.20	0.28	2	4	86
	3-20	5-10	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.17	0.32			
	20-36	3-9	0.50-1.00	2.0-6.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.32			
	36-40	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
158:												
Limking---------------	0-6	10-16	0.75-0.90	0.6-2.0	0.13-0.16	0.0-2.9	2.0-8.0	0.32	0.32	3	5	56
	6-13	8-16	0.85-1.00	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.17	0.32			
	13-22	5-15	0.85-1.00	2.0-6.0	0.06-0.09	0.0-2.9	1.0-2.0	0.10	0.28			
	22-44	2-5	1.35-1.55	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	44-58	0-5	1.40-1.70	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	58-62	---	---	---	---	---	---	---	---			
159:												
Limking---------------	0-6	10-16	0.75-0.90	0.6-2.0	0.13-0.16	0.0-2.9	2.0-8.0	0.32	0.32	3	5	56
	6-13	8-16	0.85-1.00	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.17	0.32			
	13-22	5-15	0.85-1.00	2.0-6.0	0.06-0.09	0.0-2.9	1.0-2.0	0.10	0.28			
	22-44	2-5	1.35-1.55	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	44-58	0-5	1.40-1.70	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	58-62	---	---	---	---	---	---	---	---			
Coopmont--------------	0-5	4-14	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	1.0-2.0	0.24	0.28	4	4	134
	5-12	5-15	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	0.0-0.5	0.24	0.28			
	12-28	2-10	0.60-0.85	2.0-6.0	0.10-0.18	0.0-2.9	0.0-0.5	0.15	0.28			
	28-50	5-10	1.45-1.60	0.6-2.0	0.05-0.11	0.0-2.9	0.0-0.5	0.20	0.32			
	50-60	0-2	1.45-1.60	20.0-100.0	0.02-0.05	0.0-2.9	0.0-0.5	0.10	0.28			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
160:												
Limking	0-6	10-16	0.75-0.90	0.6-2.0	0.13-0.16	0.0-2.9	2.0-8.0	0.32	0.32	3	5	56
	6-13	8-16	0.85-1.00	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.17	0.32			
	13-22	5-15	0.85-1.00	2.0-6.0	0.06-0.09	0.0-2.9	1.0-2.0	0.10	0.28			
	22-44	2-5	1.35-1.55	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	44-58	0-5	1.40-1.70	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	58-62	---	---	---	---	---	---	---	---			
Coopmont	0-5	4-14	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	1.0-2.0	0.24	0.28	4	4	134
	5-12	5-15	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	0.0-0.5	0.24	0.28			
	12-28	2-10	0.60-0.85	2.0-6.0	0.10-0.18	0.0-2.9	0.0-0.5	0.15	0.28			
	28-50	5-10	1.45-1.60	0.6-2.0	0.05-0.11	0.0-2.9	0.0-0.5	0.20	0.32			
	50-60	0-2	1.45-1.60	20.0-100.0	0.02-0.05	0.0-2.9	0.0-0.5	0.10	0.28			
161:												
Limking	0-6	10-16	0.75-0.90	0.6-2.0	0.13-0.16	0.0-2.9	2.0-8.0	0.32	0.32	3	5	56
	6-13	8-16	0.85-1.00	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.17	0.32			
	13-22	5-15	0.85-1.00	2.0-6.0	0.06-0.09	0.0-2.9	1.0-2.0	0.10	0.28			
	22-44	2-5	1.35-1.55	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	44-58	0-5	1.40-1.70	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	58-62	---	---	---	---	---	---	---	---			
Coopmont	0-5	4-14	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	1.0-2.0	0.24	0.28	4	4	86
	5-12	5-15	0.60-0.85	0.6-2.0	0.12-0.20	0.0-2.9	0.0-0.5	0.24	0.28			
	12-28	2-10	0.60-0.85	2.0-6.0	0.10-0.18	0.0-2.9	0.0-0.5	0.15	0.28			
	28-50	5-10	1.45-1.60	0.6-2.0	0.05-0.11	0.0-2.9	0.0-0.5	0.20	0.32			
	50-60	0-2	1.45-1.60	20.0-100.0	0.02-0.05	0.0-2.9	0.0-0.5	0.10	0.28			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
162:												
Limking	0-6	10-16	0.75-0.90	0.6-2.0	0.13-0.16	0.0-2.9	2.0-8.0	0.32	0.32	3	5	56
	6-13	8-16	0.85-1.00	0.6-2.0	0.08-0.11	0.0-2.9	1.0-3.0	0.17	0.32			
	13-22	5-15	0.85-1.00	2.0-6.0	0.06-0.09	0.0-2.9	1.0-2.0	0.10	0.28			
	22-44	2-5	1.35-1.55	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	44-58	0-5	1.40-1.70	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	58-62	---	---	---	---	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
163:												
Line	0-4	5-10	0.80-0.85	0.6-2.0	0.19-0.22	0.0-2.9	0.5-2.0	0.24	0.28	2	4	86
	4-15	5-10	0.80-0.85	0.6-2.0	0.17-0.20	0.0-2.9	0.5-1.0	0.20	0.28			
	15-60	0-2	1.80-2.00	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.05	0.24			
164:												
Line	0-10	5-10	0.80-0.85	0.6-2.0	0.19-0.22	0.0-2.9	0.5-2.0	0.24	0.28	3	4	86
	10-21	5-10	0.80-0.85	0.6-2.0	0.17-0.20	0.0-2.9	0.5-1.0	0.20	0.28			
	21-60	0-2	1.80-2.00	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.05	0.24			
165:												
Line	0-8	5-10	0.80-0.85	0.6-2.0	0.15-0.19	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	8-22	5-10	0.80-0.85	0.6-6.0	0.10-0.15	0.0-2.9	0.5-1.0	0.20	0.28			
	22-60	0-2	1.80-2.00	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.05	0.20			
166:												
Line	0-10	5-10	0.80-0.85	0.6-2.0	0.19-0.22	0.0-2.9	0.5-2.0	0.24	0.28	3	4	86
	10-21	5-10	0.80-0.85	0.6-2.0	0.17-0.20	0.0-2.9	0.5-1.0	0.20	0.28			
	21-60	0-2	1.80-2.00	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.05	0.24			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
166:												
Vabbing---------------	0-3	5-10	0.75-0.95	0.6-2.0	0.15-0.19	0.0-2.9	0.5-1.0	0.17	0.24	5	3	86
	3-10	2-10	0.80-1.00	0.6-2.0	0.15-0.19	0.0-2.9	1.0-3.0	0.10	0.24			
	10-26	4-12	0.80-1.00	0.6-20.0	0.12-0.18	0.0-2.9	0.0-2.0	0.05	0.28			
	26-60	6-10	1.35-1.50	0.6-20.0	0.03-0.04	0.0-2.9	0.0-1.0	0.02	0.28			
167:												
Loneridge-------------	0-9	15-25	1.15-1.35	0.6-2.0	0.16-0.18	0.0-2.9	2.0-4.0	0.32	0.37	5	6	48
	9-36	35-55	1.20-1.40	0.06-0.2	0.08-0.11	6.0-8.9	0.0-0.5	0.10	0.55			
	36-60	30-35	1.25-1.45	0.06-0.2	0.08-0.09	3.0-5.9	0.0-0.5	0.10	0.55			
168:												
Loneridge-------------	0-4	15-25	1.15-1.35	0.6-2.0	0.16-0.18	0.0-2.9	2.0-4.0	0.32	0.37	5	6	48
	4-30	15-25	1.30-1.50	0.6-2.0	0.09-0.13	0.0-2.9	0.0-1.0	0.20	0.55			
	30-60	35-55	1.20-1.40	0.06-0.2	0.08-0.11	6.0-8.9	0.0-0.5	0.10	0.55			
169:												
Loneridge-------------	0-8	15-25	1.15-1.35	0.6-2.0	0.16-0.18	0.0-2.9	2.0-4.0	0.20	0.32	5	7	38
	8-60	35-55	1.20-1.40	0.06-0.2	0.08-0.11	6.0-8.9	0.0-0.5	0.10	0.55			
170:												
Macreeing-------------	0-5	10-18	1.20-1.40	0.6-2.0	0.09-0.11	0.0-2.9	1.0-2.0	0.17	0.28	3	3	86
	5-23	12-18	1.35-1.50	0.6-2.0	0.07-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	23-48	10-15	1.35-1.50	0.6-2.0	0.04-0.07	0.0-2.9	0.0-0.5	0.05	0.28			
	48-52	---	---	---	---	---	---	---	---			
171:												
Macreeing-------------	0-5	10-18	1.20-1.40	0.6-2.0	0.09-0.11	0.0-2.9	1.0-2.0	0.17	0.28	3	3	86
	5-23	12-18	1.35-1.50	0.6-2.0	0.07-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	23-48	10-15	1.35-1.50	0.6-2.0	0.04-0.07	0.0-2.9	0.0-0.5	0.05	0.28			
	48-52	---	---	---	---	---	---	---	---			
172:												
Macreeing-------------	0-5	10-18	1.20-1.40	0.6-2.0	0.09-0.11	0.0-2.9	1.0-2.0	0.17	0.28	3	3	86
	5-23	12-18	1.35-1.50	0.6-2.0	0.07-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	23-48	10-15	1.35-1.50	0.6-2.0	0.04-0.07	0.0-2.9	0.0-0.5	0.05	0.28			
	48-52	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
173:												
Mansonia--------------	0-19	6-14	0.55-0.85	0.6-2.0	0.12-0.14	0.0-2.9	1.0-2.0	0.32	0.32	5	2	134
	19-41	5-10	0.55-0.85	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.24	0.32			
	41-60	0-5	1.50-1.70	2.0-6.0	0.03-0.06	0.0-2.9	0.5-1.0	0.10	0.20			
174:												
Mansonia--------------	0-10	6-14	0.55-0.85	0.6-2.0	0.11-0.13	0.0-2.9	1.0-2.0	0.20	0.32	3	3	86
	10-20	5-10	0.55-0.85	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.24	0.32			
	20-50	5-10	0.65-0.85	0.6-2.0	0.07-0.08	0.0-2.9	0.5-1.0	0.24	0.32			
	50-54	---	---	---	---	---	---	---	---			
Swakane---------------	0-2	5-10	1.35-1.45	0.6-2.0	0.09-0.10	0.0-2.9	1.0-3.0	0.17	0.28	1	4	86
	2-15	5-15	1.45-1.55	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.10	0.32			
	15-19	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
175:												
Mansonia--------------	0-10	6-14	0.55-0.85	0.6-2.0	0.11-0.13	0.0-2.9	1.0-2.0	0.20	0.32	3	3	134
	10-20	5-10	0.55-0.85	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.24	0.32			
	20-50	5-10	0.65-0.85	0.6-2.0	0.07-0.08	0.0-2.9	0.5-1.0	0.24	0.32			
	50-54	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
175:												
Swakane---------------	0-6	5-10	1.35-1.45	0.6-2.0	0.09-0.10	0.0-2.9	1.0-3.0	0.17	0.28	1	4	134
	6-11	5-15	1.45-1.55	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.10	0.32			
	11-14	5-15	1.45-1.55	0.6-2.0	0.04-0.09	0.0-2.9	0.5-1.0	0.10	0.32			
	14-18	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
176:												
Marmont---------------	0-10	6-14	0.65-0.85	0.6-2.0	0.10-0.11	0.0-2.9	1.0-2.0	0.15	0.28	3	4	134
	10-22	5-10	0.65-0.85	0.6-2.0	0.07-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	22-60	1-3	1.40-1.60	20.0-100.0	0.01-0.02	0.0-2.9	0.0-0.5	0.02	0.20			
177:												
Marmont---------------	0-10	6-14	0.65-0.85	0.6-2.0	0.10-0.11	0.0-2.9	1.0-2.0	0.15	0.28	3	4	134
	10-22	5-10	0.65-0.85	0.6-2.0	0.07-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	22-60	1-3	1.40-1.60	20.0-100.0	0.01-0.02	0.0-2.9	0.0-0.5	0.02	0.20			
178:												
Marmont---------------	0-10	6-14	0.65-0.85	0.6-2.0	0.10-0.11	0.0-2.9	1.0-2.0	0.15	0.28	3	4	134
	10-22	5-10	0.65-0.85	0.6-2.0	0.07-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	22-60	1-3	1.40-1.60	20.0-100.0	0.01-0.02	0.0-2.9	0.0-0.5	0.02	0.20			
179:												
McCree----------------	0-5	5-14	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	5-19	5-15	0.80-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-56	6-12	1.30-1.40	0.6-2.0	0.03-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	56-60	---	---	---	---	---	---	---	---			
180:												
McCree----------------	0-5	5-14	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	5-19	5-15	0.80-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-56	6-12	1.30-1.40	0.6-2.0	0.03-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	56-60	---	---	---	---	---	---	---	---			
181:												
McCree----------------	0-5	5-14	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	5-19	5-15	0.80-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-56	6-12	1.30-1.40	0.6-2.0	0.03-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	56-60	---	---	---	---	---	---	---	---			
182:												
McCree----------------	0-5	5-14	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	5-19	5-15	0.80-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-56	6-12	1.30-1.40	0.6-2.0	0.03-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	56-60	---	---	---	---	---	---	---	---			
Palmich---------------	0-4	5-10	0.75-0.95	0.6-2.0	0.13-0.15	0.0-2.9	1.0-3.0	0.17	0.28	5	4	86
	4-15	5-10	0.75-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.28			
	15-26	5-15	0.75-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.32			
	26-44	5-15	0.75-0.95	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.05	0.32			
	44-60	6-12	1.20-1.50	0.6-2.0	0.05-0.09	0.0-2.9	0.0-0.5	0.05	0.28			
183:												
McCree----------------	0-5	5-14	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	5-19	5-15	0.80-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-56	6-12	1.30-1.40	0.6-2.0	0.03-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	56-60	---	---	---	---	---	---	---	---			
Palmont---------------	0-1	6-14	0.75-0.95	2.0-6.0	0.09-0.12	0.0-2.9	0.5-1.0	0.20	0.28	2	4	86
	1-11	5-15	0.75-0.95	2.0-6.0	0.07-0.10	0.0-2.9	0.0-0.5	0.15	0.28			
	11-60	0-5	1.30-1.45	6.0-20.0	0.03-0.11	0.0-2.9	0.0-0.5	0.10	0.28			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
183:												
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
184:												
McCree	0-5	5-14	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	5-19	5-15	0.80-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-56	6-12	1.30-1.40	0.6-2.0	0.03-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	56-60	---	---	---	---	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
185:												
Mippon	0-10	3-10	1.15-1.35	0.6-2.0	0.09-0.11	0.0-2.9	1.0-2.0	0.17	0.28	2	4	86
	10-18	0-7	1.25-1.50	6.0-20.0	0.03-0.05	0.0-2.9	0.5-1.0	0.05	0.24			
	18-60	0-5	1.45-1.65	20.0-100.0	0.01-0.02	0.0-2.9	0.0-0.5	0.02	0.17			
186:												
Mippon	0-10	0-5	1.15-1.35	2.0-6.0	0.05-0.06	0.0-2.9	1.0-2.0	0.05	0.24	2	3	86
	10-16	0-7	1.25-1.50	2.0-6.0	0.03-0.05	0.0-2.9	0.5-1.0	0.05	0.24			
	16-60	0-5	1.45-1.65	20.0-100.0	0.01-0.02	0.0-2.9	0.0-0.5	0.02	0.17			
187:												
Mippon	0-6	0-5	1.25-1.45	6.0-20.0	0.05-0.07	0.0-2.9	1.0-3.0	0.05	0.24	2	3	86
	6-18	2-10	1.20-1.50	6.0-20.0	0.06-0.08	0.0-2.9	0.0-0.5	0.10	0.32			
	18-60	0-5	1.45-1.65	20.0-100.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.20			
188:												
Morical	0-12	5-11	1.10-1.35	0.6-2.0	0.11-0.15	0.0-2.9	2.0-4.0	0.24	0.24	3	3	86
	12-23	5-15	1.20-1.40	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	23-37	25-35	1.35-1.50	0.6-2.0	0.13-0.18	3.0-5.9	0.5-1.0	0.32	0.37			
	37-47	---	---	---	---	---	---	---	---			
189:												
Morical	0-12	5-11	1.10-1.35	0.6-2.0	0.11-0.15	0.0-2.9	2.0-4.0	0.24	0.24	3	3	86
	12-23	5-15	1.20-1.40	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	23-37	25-35	1.35-1.50	0.6-2.0	0.13-0.18	3.0-5.9	0.5-1.0	0.32	0.37			
	37-47	---	---	---	---	---	---	---	---			
190:												
Morical	0-12	5-11	1.10-1.35	0.6-2.0	0.11-0.15	0.0-2.9	2.0-4.0	0.24	0.24	3	3	86
	12-23	5-15	1.20-1.40	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	23-37	25-35	1.35-1.50	0.6-2.0	0.13-0.18	3.0-5.9	0.5-1.0	0.32	0.37			
	37-47	---	---	---	---	---	---	---	---			
191:												
Morical	0-12	5-11	1.10-1.35	0.6-2.0	0.11-0.15	0.0-2.9	2.0-4.0	0.24	0.24	3	3	86
	12-23	5-15	1.20-1.40	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	23-37	25-35	1.35-1.50	0.6-2.0	0.13-0.18	3.0-5.9	0.5-1.0	0.32	0.37			
	37-47	---	---	---	---	---	---	---	---			
Dragoon	0-10	10-15	1.20-1.35	0.6-2.0	0.19-0.21	0.0-2.9	3.0-4.0	0.43	0.43	3	5	56
	10-27	20-30	1.35-1.50	0.6-2.0	0.19-0.21	3.0-5.9	0.0-1.0	0.37	0.37			
	27-37	---	---	---	---	---	---	---	---			
192:												
Morical	0-12	5-11	1.10-1.35	0.6-2.0	0.11-0.15	0.0-2.9	2.0-4.0	0.24	0.24	3	3	86
	12-23	5-15	1.20-1.40	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	23-37	25-35	1.35-1.50	0.6-2.0	0.13-0.18	3.0-5.9	0.5-1.0	0.32	0.37			
	37-47	---	---	---	---	---	---	---	---			
Dragoon	0-8	5-10	1.20-1.40	0.6-2.0	0.12-0.16	0.0-2.9	3.0-4.0	0.37	0.37	3	3	86
	8-24	20-30	1.35-1.50	0.6-2.0	0.19-0.21	3.0-5.9	0.0-1.0	0.37	0.37			
	24-30	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
193:												
Morical	0-12	5-11	1.10-1.35	0.6-2.0	0.11-0.15	0.0-2.9	2.0-4.0	0.24	0.24	3	3	86
	12-23	5-15	1.20-1.40	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	23-37	25-35	1.35-1.50	0.6-2.0	0.13-0.18	3.0-5.9	0.5-1.0	0.32	0.37			
	37-47	---	---	---	---	---	---	---	---			
Dragoon	0-8	5-10	1.20-1.40	0.6-2.0	0.12-0.16	0.0-2.9	3.0-4.0	0.37	0.37	3	3	86
	8-24	20-30	1.35-1.50	0.6-2.0	0.19-0.21	3.0-5.9	0.0-1.0	0.37	0.37			
	24-34	---	---	---	---	---	---	---	---			
194:												
Morical	0-12	5-11	1.10-1.35	0.6-2.0	0.11-0.15	0.0-2.9	2.0-4.0	0.24	0.24	3	3	86
	12-23	5-15	1.20-1.40	0.6-2.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	23-37	25-35	1.35-1.50	0.6-2.0	0.13-0.18	3.0-5.9	0.5-1.0	0.32	0.37			
	37-47	---	---	---	---	---	---	---	---			
Dragoon	0-8	5-10	1.20-1.40	0.6-2.0	0.12-0.16	0.0-2.9	3.0-4.0	0.37	0.37	3	3	86
	8-24	20-30	1.35-1.50	0.6-2.0	0.19-0.21	3.0-5.9	0.0-1.0	0.37	0.37			
	24-30	---	---	---	---	---	---	---	---			
195:												
Mountaineer	0-4	5-10	0.85-0.95	0.6-2.0	0.06-0.08	0.0-2.9	2.0-4.0	0.17	0.28	2	4	86
	4-19	5-10	0.85-0.95	0.6-2.0	0.05-0.06	0.0-2.9	0.5-1.0	0.10	0.28			
	19-38	5-15	1.10-1.30	0.6-2.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.32			
	38-42	---	---	---	---	---	---	---	---			
196:												
Mountaineer	0-4	5-10	0.85-0.95	0.6-2.0	0.06-0.08	0.0-2.9	2.0-4.0	0.17	0.28	2	4	86
	4-19	5-10	0.85-0.95	0.6-2.0	0.05-0.06	0.0-2.9	0.5-1.0	0.10	0.28			
	19-38	5-15	1.10-1.30	0.6-2.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.32			
	38-42	---	---	---	---	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
197:												
Mountaineer	0-4	5-10	0.85-0.95	0.6-2.0	0.06-0.08	0.0-2.9	2.0-4.0	0.17	0.28	2	4	86
	4-19	5-10	0.85-0.95	0.6-2.0	0.05-0.06	0.0-2.9	0.5-1.0	0.10	0.28			
	19-38	5-15	1.10-1.30	0.6-2.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.32			
	38-42	---	---	---	---	---	---	---	---			
Tillicum	0-8	6-14	0.65-0.85	0.6-2.0	0.15-0.17	0.0-2.9	0.5-2.0	0.32	0.32	3	3	86
	8-24	5-15	0.85-1.00	0.6-2.0	0.13-0.17	0.0-2.9	0.5-1.0	0.32	0.37			
	24-42	5-10	1.30-1.55	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.17	0.37			
	42-46	---	---	---	---	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
198:												
Nahahum	0-3	18-20	1.10-1.30	0.6-2.0	0.16-0.18	0.0-2.9	1.0-2.0	0.32	0.32	5	5	56
	3-16	20-22	1.20-1.40	0.6-2.0	0.14-0.16	0.0-2.9	0.5-1.0	0.28	0.32			
	16-44	27-35	1.25-1.40	0.2-0.6	0.15-0.17	3.0-5.9	0.0-0.5	0.20	0.28			
	44-60	22-30	1.25-1.45	0.6-2.0	0.11-0.13	0.0-2.9	0.0-0.5	0.15	0.32			
199:												
Nahahum	0-3	18-20	1.10-1.30	0.6-2.0	0.16-0.18	0.0-2.9	1.0-2.0	0.32	0.32	5	5	56
	3-16	20-22	1.20-1.40	0.6-2.0	0.14-0.16	0.0-2.9	0.5-1.0	0.28	0.32			
	16-44	27-35	1.25-1.40	0.2-0.6	0.15-0.17	3.0-5.9	0.0-0.5	0.20	0.28			
	44-60	22-30	1.25-1.45	0.6-2.0	0.11-0.13	0.0-2.9	0.0-0.5	0.15	0.32			
Taneum	0-16	15-18	1.15-1.30	0.6-2.0	0.15-0.18	0.0-2.9	2.0-4.0	0.37	0.43	3	5	56
	16-21	18-30	1.30-1.40	0.06-0.2	0.14-0.17	3.0-5.9	1.0-2.0	0.28	0.49			
	21-47	25-35	1.35-1.45	0.06-0.2	0.12-0.14	3.0-5.9	0.5-1.0	0.20	0.32			
	47-58	25-35	1.35-1.45	0.06-0.2	0.07-0.09	3.0-5.9	0.0-0.5	0.05	0.32			
	58-62	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
200:												
Nard	0-7	5-12	1.25-1.55	0.6-2.0	0.11-0.13	0.0-2.9	0.5-2.0	0.32	0.32	5	3	86
	7-27	18-30	1.25-1.45	0.2-0.6	0.17-0.19	3.0-5.9	0.0-0.5	0.37	0.37			
	27-67	18-35	1.25-1.50	0.2-0.6	0.17-0.19	3.0-5.9	0.0-0.5	0.32	0.32			
201:												
Nard	0-7	5-12	1.25-1.55	0.6-2.0	0.11-0.13	0.0-2.9	0.5-2.0	0.32	0.32	5	3	86
	7-27	18-30	1.25-1.45	0.2-0.6	0.17-0.19	3.0-5.9	0.0-0.5	0.37	0.37			
	27-67	18-35	1.25-1.50	0.2-0.6	0.17-0.19	3.0-5.9	0.0-0.5	0.32	0.32			
202:												
Nard	0-7	5-12	1.25-1.55	0.6-2.0	0.11-0.13	0.0-2.9	0.5-2.0	0.32	0.32	5	3	86
	7-27	18-30	1.25-1.45	0.2-0.6	0.17-0.19	3.0-5.9	0.0-0.5	0.37	0.37			
	27-67	18-35	1.25-1.50	0.2-0.6	0.17-0.19	3.0-5.9	0.0-0.5	0.32	0.32			
Blag	0-6	5-10	1.15-1.30	2.0-6.0	0.07-0.09	0.0-2.9	0.5-1.0	0.17	0.32	1	4	86
	6-16	5-10	1.30-1.50	2.0-6.0	0.07-0.09	0.0-2.9	0.0-0.5	0.24	0.32			
	16-20	---	---	---	---	---	---	---	---			
203:												
Nard	0-7	5-12	1.25-1.55	0.6-2.0	0.11-0.13	0.0-2.9	0.5-2.0	0.32	0.32	5	3	86
	7-27	18-30	1.25-1.45	0.2-0.6	0.17-0.19	3.0-5.9	0.0-0.5	0.37	0.37			
	27-67	18-35	1.25-1.50	0.2-0.6	0.17-0.19	3.0-5.9	0.0-0.5	0.32	0.32			
Brisky	0-4	5-15	1.10-1.30	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.10	0.32	1	6	48
	4-10	5-15	1.20-1.45	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.15	0.37			
	10-14	---	---	---	---	---	---	---	---			
204:												
Nardine	0-4	10-15	1.30-1.50	0.6-2.0	0.16-0.18	0.0-2.9	1.0-2.0	0.32	0.32	5	5	56
	4-17	12-18	1.55-1.65	0.6-2.0	0.16-0.18	0.0-2.9	0.5-1.0	0.37	0.37			
	17-42	35-40	1.45-1.55	0.2-0.6	0.18-0.20	3.0-5.9	0.0-0.5	0.43	0.43			
	42-60	15-30	1.45-1.55	0.2-0.6	0.16-0.18	0.0-2.9	0.0-0.5	0.37	0.37			
205:												
Nardmont	0-15	17-25	1.15-1.35	0.6-2.0	0.15-0.18	0.0-2.9	0.5-2.0	0.32	0.32	5	5	56
	15-47	18-27	1.30-1.40	0.6-2.0	0.14-0.17	3.0-5.9	0.0-0.5	0.28	0.32			
	47-60	18-27	1.30-1.40	0.6-2.0	0.12-0.15	3.0-5.9	0.0-0.5	0.24	0.28			
206:												
Nardmont	0-15	17-25	1.15-1.35	0.6-2.0	0.15-0.18	0.0-2.9	0.5-2.0	0.32	0.32	5	5	56
	15-47	18-27	1.30-1.40	0.6-2.0	0.14-0.17	3.0-5.9	0.0-0.5	0.28	0.32			
	47-60	18-27	1.30-1.40	0.6-2.0	0.12-0.15	3.0-5.9	0.0-0.5	0.24	0.28			
207:												
Natapoc	0-6	5-10	0.65-0.85	2.0-6.0	0.16-0.20	0.0-2.9	1.0-2.0	0.32	0.32	3	4	86
	6-19	5-10	0.65-0.85	2.0-6.0	0.16-0.18	0.0-2.9	1.0-2.0	0.28	0.32			
	19-60	2-10	1.70-1.85	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	0.15	0.32			
208:												
Natapoc	0-6	5-10	0.65-0.85	2.0-6.0	0.16-0.20	0.0-2.9	1.0-2.0	0.32	0.32	3	4	86
	6-19	5-10	0.65-0.85	2.0-6.0	0.16-0.18	0.0-2.9	1.0-2.0	0.28	0.32			
	19-60	2-10	1.70-1.85	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	0.15	0.32			
209:												
Natapoc	0-6	5-10	0.65-0.85	2.0-6.0	0.16-0.20	0.0-2.9	1.0-2.0	0.32	0.32	3	4	86
	6-19	5-10	0.65-0.85	2.0-6.0	0.16-0.18	0.0-2.9	1.0-2.0	0.28	0.32			
	19-60	2-10	1.70-1.85	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	0.15	0.32			
Thow	0-8	6-14	0.70-0.85	0.6-2.0	0.11-0.15	0.0-2.9	1.0-2.0	0.28	0.37	4	2	134
	8-22	5-15	0.75-0.90	0.6-2.0	0.09-0.12	0.0-2.9	0.0-0.5	0.28	0.37			
	22-42	5-10	0.75-1.00	0.6-2.0	0.07-0.10	0.0-2.9	0.0-0.5	0.28	0.37			
	42-60	0-5	1.40-1.75	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.24			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
210:												
Naxing	0-10	10-16	0.70-0.95	0.6-2.0	0.09-0.12	0.0-2.9	1.0-3.0	0.15	0.32	5	7	38
	10-29	6-16	0.85-0.95	0.6-2.0	0.05-0.06	0.0-2.9	0.0-1.0	0.05	0.37			
	29-60	6-16	0.85-1.00	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.05	0.37			
211:												
Naxing	0-10	10-16	0.70-0.95	0.6-2.0	0.09-0.12	0.0-2.9	1.0-3.0	0.15	0.32	5	7	38
	10-29	6-16	0.85-0.95	0.6-2.0	0.05-0.06	0.0-2.9	0.0-1.0	0.05	0.37			
	29-60	6-16	0.85-1.00	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.05	0.37			
212:												
Newbell	0-11	5-10	0.65-0.85	2.0-6.0	0.16-0.19	0.0-2.9	2.0-6.0	0.20	0.28	3	4	86
	11-60	2-10	1.70-1.85	0.2-0.6	0.07-0.12	0.0-2.9	1.0-2.0	0.10	0.32			
213:												
Nimue	0-2	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	3	86
	2-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
214:												
Nimue	0-7	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	4	86
	7-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
215:												
Nimue	0-2	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	3	86
	2-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
216:												
Nimue	0-7	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	4	86
	7-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
Nimue, dry	0-2	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	3	86
	2-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
217:												
Nimue, dry	0-2	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	3	86
	2-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
Nimue	0-7	5-10	0.75-0.95	2.0-6.0	0.11-0.13	0.0-2.9	6.0-10	0.17	0.28	5	4	86
	7-14	6-12	0.85-0.95	0.6-2.0	0.14-0.18	0.0-2.9	3.0-6.0	0.17	0.32			
	14-60	5-10	1.05-1.35	0.6-2.0	0.03-0.07	0.0-2.9	0.0-3.0	0.05	0.32			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
218:												
Oldbutte	0-17	10-20	1.25-1.40	0.6-2.0	0.22-0.24	0.0-2.9	3.0-5.0	0.32	0.32	5	5	56
	17-36	28-35	1.35-1.60	0.2-0.6	0.16-0.19	3.0-5.9	0.5-1.0	0.32	0.32			
	36-60	20-30	1.45-1.60	0.6-2.0	0.14-0.17	0.0-2.9	0.0-0.5	0.32	0.32			
219:												
Oldbutte	0-17	10-20	1.25-1.40	0.6-2.0	0.22-0.24	0.0-2.9	3.0-5.0	0.32	0.32	5	5	56
	17-36	28-35	1.35-1.60	0.2-0.6	0.16-0.19	3.0-5.9	0.5-1.0	0.32	0.32			
	36-60	20-30	1.45-1.60	0.6-2.0	0.14-0.17	0.0-2.9	0.0-0.5	0.32	0.32			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
220:												
Palmich---------------	0-4	5-10	0.75-0.95	0.6-2.0	0.13-0.15	0.0-2.9	1.0-3.0	0.17	0.28	5	4	86
	4-15	5-10	0.75-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.28			
	15-26	5-15	0.75-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.32			
	26-44	5-15	0.75-0.95	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.05	0.32			
	44-60	6-12	1.20-1.50	0.6-2.0	0.05-0.09	0.0-2.9	0.0-0.5	0.05	0.28			
221:												
Palmich---------------	0-4	5-10	0.75-0.95	0.6-2.0	0.13-0.15	0.0-2.9	1.0-3.0	0.17	0.28	5	4	86
	4-15	5-10	0.75-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.28			
	15-26	5-15	0.75-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.32			
	26-44	5-15	0.75-0.95	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.05	0.32			
	44-60	6-12	1.20-1.50	0.6-2.0	0.05-0.09	0.0-2.9	0.0-0.5	0.05	0.28			
222:												
Palmich---------------	0-4	5-10	0.75-0.95	0.6-2.0	0.13-0.15	0.0-2.9	1.0-3.0	0.17	0.28	5	4	86
	4-15	5-10	0.75-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.28			
	15-26	5-15	0.75-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.32			
	26-44	5-15	0.75-0.95	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.05	0.32			
	44-60	6-12	1.20-1.50	0.6-2.0	0.05-0.09	0.0-2.9	0.0-0.5	0.05	0.28			
223:												
Palmich---------------	0-4	5-10	0.75-0.95	0.6-2.0	0.13-0.15	0.0-2.9	1.0-3.0	0.17	0.28	5	4	86
	4-15	5-10	0.75-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.28			
	15-26	5-15	0.75-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.32			
	26-44	5-15	0.75-0.95	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.05	0.32			
	44-60	6-12	1.20-1.50	0.6-2.0	0.05-0.09	0.0-2.9	0.0-0.5	0.05	0.28			
McCree----------------	0-5	5-14	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	5-19	5-15	0.80-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-56	6-12	1.30-1.40	0.6-2.0	0.03-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	56-60	---	---	---	---	---	---	---	---			
224:												
Palmich---------------	0-4	5-10	0.75-0.95	0.6-2.0	0.13-0.15	0.0-2.9	1.0-3.0	0.17	0.28	5	4	86
	4-15	5-10	0.75-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.28			
	15-26	5-15	0.75-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.32			
	26-44	5-15	0.75-0.95	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.05	0.32			
	44-60	6-12	1.20-1.50	0.6-2.0	0.05-0.09	0.0-2.9	0.0-0.5	0.05	0.28			
McCree----------------	0-5	5-14	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.20	0.28	3	3	86
	5-19	5-15	0.80-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.28			
	19-56	6-12	1.30-1.40	0.6-2.0	0.03-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	56-60	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
225:												
Palmich---------------	0-4	5-10	0.75-0.95	0.6-2.0	0.13-0.15	0.0-2.9	1.0-3.0	0.17	0.28	5	4	86
	4-15	5-10	0.75-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.28			
	15-26	5-15	0.75-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.32			
	26-44	5-15	0.75-0.95	0.6-2.0	0.09-0.11	0.0-2.9	0.0-0.5	0.05	0.32			
	44-60	6-12	1.20-1.50	0.6-2.0	0.05-0.09	0.0-2.9	0.0-0.5	0.05	0.28			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
226:												
Palmont---------------	0-5	6-14	0.75-0.95	2.0-6.0	0.09-0.12	0.0-2.9	0.5-1.0	0.20	0.28	2	4	86
	5-11	5-15	0.75-0.95	2.0-6.0	0.07-0.10	0.0-2.9	0.0-0.5	0.15	0.28			
	11-24	0-5	1.30-1.45	2.0-6.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	24-60	0-5	1.30-1.45	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
227:												
Palmont---------------	0-5	6-14	0.75-0.95	2.0-6.0	0.09-0.12	0.0-2.9	0.5-1.0	0.20	0.28	2	4	86
	5-11	5-15	0.75-0.95	2.0-6.0	0.07-0.10	0.0-2.9	0.0-0.5	0.15	0.28			
	11-24	0-5	1.30-1.45	2.0-6.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	24-60	0-5	1.30-1.45	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
228:												
Palmont---------------	0-3	6-14	0.75-0.95	2.0-6.0	0.07-0.10	0.0-2.9	1.0-3.0	0.20	0.28	2	6	48
	3-10	5-15	0.75-0.95	2.0-6.0	0.07-0.10	0.0-2.9	0.0-0.5	0.15	0.28			
	10-25	0-5	1.30-1.45	2.0-6.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	25-60	0-5	1.30-1.45	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
229:												
Palmont---------------	0-5	6-14	0.75-0.95	2.0-6.0	0.09-0.12	0.0-2.9	0.5-1.0	0.20	0.28	2	4	86
	5-11	5-15	0.75-0.95	2.0-6.0	0.07-0.10	0.0-2.9	0.0-0.5	0.15	0.28			
	11-24	0-5	1.30-1.45	2.0-6.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	24-60	0-5	1.30-1.45	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
230:												
Ramparter-------------	0-11	5-10	0.60-0.85	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.32	0.32	2	3	86
	11-20	5-15	0.60-0.85	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.32			
	20-60	0-2	0.60-0.85	6.0-20.0	0.02-0.03	0.0-2.9	0.5-1.0	0.02	0.05			
231:												
Ramparter-------------	0-2	5-10	0.60-0.85	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.32	0.32	2	3	86
	2-14	5-15	0.60-0.85	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.32			
	14-50	0-2	0.60-0.85	6.0-20.0	0.02-0.03	0.0-2.9	0.5-1.0	0.02	0.05			
	50-60	0-2	1.25-1.55	6.0-20.0	0.02-0.03	0.0-2.9	0.0-0.5	0.10	0.24			
232:												
Ramparter-------------	0-2	5-10	0.60-0.85	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.32	0.32	2	3	86
	2-14	5-15	0.60-0.85	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.32			
	14-50	0-2	0.60-0.85	6.0-20.0	0.02-0.03	0.0-2.9	0.5-1.0	0.02	0.05			
	50-60	0-2	1.25-1.55	6.0-20.0	0.02-0.03	0.0-2.9	0.0-0.5	0.10	0.24			
233:												
Ramparter-------------	0-2	5-10	0.60-0.85	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.32	0.32	2	3	86
	2-14	5-15	0.60-0.85	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.32			
	14-50	0-2	0.60-0.85	6.0-20.0	0.02-0.03	0.0-2.9	0.5-1.0	0.02	0.05			
	50-60	0-2	1.25-1.55	6.0-20.0	0.02-0.03	0.0-2.9	0.0-0.5	0.10	0.24			
234:												
Ramparter-------------	0-6	5-10	0.60-0.85	0.6-2.0	0.15-0.17	0.0-2.9	0.5-20	0.32	0.37	2	4	86
	6-15	5-15	0.60-0.85	0.6-2.0	0.12-0.14	0.0-2.9	0.5-1.0	0.15	0.37			
	15-53	0-2	0.60-0.85	6.0-20.0	0.02-0.03	0.0-2.9	0.0-0.5	0.02	---			
	53-60	5-10	1.30-1.40	0.6-2.0	0.11-0.13	0.0-2.9	0.0-0.5	0.28	0.37			
235:												
Ramparter-------------	0-6	5-10	0.60-0.85	0.6-2.0	0.15-0.17	0.0-2.9	0.5-20	0.32	0.37	2	4	86
	6-15	5-15	0.60-0.85	0.6-2.0	0.12-0.14	0.0-2.9	0.5-1.0	0.15	0.37			
	15-53	0-2	0.60-0.85	6.0-20.0	0.02-0.03	0.0-2.9	0.0-0.5	0.02	---			
	53-60	5-10	1.30-1.40	0.6-2.0	0.11-0.13	0.0-2.9	0.0-0.5	0.28	0.37			
236:												
Ramparter-------------	0-11	5-10	0.60-0.85	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.32	0.32	2	3	86
	11-20	5-15	0.60-0.85	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.32			
	20-60	0-2	0.60-0.85	6.0-20.0	0.02-0.03	0.0-2.9	0.5-1.0	0.02	0.05			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
236:												
Wilma-----------------	0-4	6-14	0.70-1.00	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.24	0.24	2	3	86
	4-12	5-15	0.75-1.00	0.6-2.0	0.09-0.11	0.0-2.9	0.5-1.0	0.17	0.24			
	12-24	5-10	1.30-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.10	0.28			
	24-37	2-8	1.35-1.60	2.0-6.0	0.04-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	37-41	---	---	---	---	---	---	---	---			
237:												
Reggad----------------	0-9	0-25	0.10-0.30	0.6-2.0	0.20-0.30	0.0-2.9	40-80	0.02	0.02	2	8	0
	9-60	0-2	1.35-1.60	20.0-100.0	0.02-0.04	0.0-2.9	0-0	0.02	---			
238:												
Reggad----------------	0-9	0-25	0.10-0.30	0.6-2.0	0.20-0.30	0.0-2.9	40-80	0.02	0.02	2	8	0
	9-60	0-2	1.35-1.60	20.0-100.0	0.02-0.04	0.0-2.9	0-0	0.02	---			
Serene----------------	0-4	5-10	0.70-0.95	0.6-2.0	0.10-0.12	0.0-2.9	6.0-10	0.15	0.24	2	4	86
	4-8	5-10	0.75-1.00	0.6-2.0	0.08-0.10	0.0-2.9	0.5-1.0	0.10	0.24			
	8-13	2-10	0.85-1.00	2.0-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.10	0.24			
	13-24	0-2	1.35-1.65	6.0-20.0	0.04-0.05	0.0-2.9	0.0-0.5	0.02	0.28			
	24-34	---	---	---	---	---	---	---	---			
239:												
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
240:												
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
Blewett---------------	0-3	5-10	1.10-1.30	0.6-2.0	0.05-0.08	0.0-2.9	1.0-3.0	0.10	0.32	1	6	48
	3-10	5-12	1.20-1.45	0.6-2.0	0.04-0.08	0.0-2.9	1.0-3.0	0.10	0.32			
	10-14	---	---	---	---	---	---	---	---			
241:												
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
Borland---------------	0-6	15-20	1.15-1.30	0.6-2.0	0.15-0.17	0.0-2.9	1.0-2.0	0.32	0.32	1	5	56
	6-11	20-30	1.40-1.50	0.2-0.6	0.16-0.20	3.0-5.9	1.0-2.0	0.28	0.32			
	11-15	---	---	---	---	---	---	---	---			
242:												
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
Chumstick-------------	0-4	2-10	1.10-1.30	2.0-6.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	1	4	86
	4-14	2-10	1.20-1.40	2.0-6.0	0.06-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	14-19	2-10	1.20-1.40	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	19-23	---	---	---	---	---	---	---	---			
Icicle----------------	0-8	5-10	1.40-1.50	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.10	0.28	3	5	56
	8-28	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	28-50	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
	50-54	---	---	---	---	---	---	---	---			
243:												
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
Chumstick-------------	0-4	2-10	1.10-1.30	2.0-6.0	0.07-0.10	0.0-2.9	1.0-3.0	0.15	0.28	1	4	86
	4-14	2-10	1.20-1.40	2.0-6.0	0.06-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	14-19	2-10	1.20-1.40	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.10	0.32			
	19-23	---	---	---	---	---	---	---	---			
Icicle----------------	0-8	5-10	1.40-1.50	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.10	0.28	3	5	56
	8-28	5-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	28-50	2-10	1.40-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
	50-54	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
244:												
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
Rubble land-----------	0-60	---	---	---	---	---	---	---	---			
Glaciers, snowfields--	0-60	---	---	---	---	---	---	---	---			
245:												
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
Rubble land-----------	0-60	---	---	---	---	---	---	---	---			
Serene----------------	0-4	5-10	0.70-0.95	0.6-2.0	0.10-0.12	0.0-2.9	6.0-10	0.15	0.24	2	4	86
	4-8	5-10	0.75-1.00	0.6-2.0	0.08-0.10	0.0-2.9	0.5-1.0	0.10	0.24			
	8-13	2-10	0.85-1.00	2.0-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.10	0.24			
	13-24	0-2	1.35-1.65	6.0-20.0	0.04-0.05	0.0-2.9	0.0-0.5	0.02	0.28			
	24-34	---	---	---	---	---	---	---	---			
246:												
Rubble land-----------	0-60	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
247:												
Safety----------------	0-3	6-10	1.20-1.30	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.20	0.28	3	3	86
	3-11	6-10	1.30-1.40	0.6-2.0	0.08-0.11	0.0-2.9	1.0-2.0	0.17	0.28			
	11-24	6-10	1.30-1.40	0.6-2.0	0.07-0.11	0.0-2.9	0.0-1.0	0.20	0.32			
	24-34	---	---	---	---	---	---	---	---			
248:												
Safety----------------	0-3	6-10	1.20-1.30	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.20	0.28	3	3	86
	3-11	6-10	1.30-1.40	0.6-2.0	0.08-0.11	0.0-2.9	1.0-2.0	0.17	0.28			
	11-24	6-10	1.30-1.40	0.6-2.0	0.07-0.11	0.0-2.9	0.0-1.0	0.20	0.32			
	24-34	---	---	---	---	---	---	---	---			
249:												
Safety----------------	0-3	6-10	1.20-1.30	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.20	0.28	3	3	86
	3-11	6-10	1.30-1.40	0.6-2.0	0.08-0.11	0.0-2.9	1.0-2.0	0.17	0.28			
	11-24	6-10	1.30-1.40	0.6-2.0	0.07-0.11	0.0-2.9	0.0-1.0	0.20	0.32			
	24-34	---	---	---	---	---	---	---	---			
250:												
Safety----------------	0-3	6-10	1.20-1.30	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.20	0.28	3	3	86
	3-11	6-10	1.30-1.40	0.6-2.0	0.08-0.11	0.0-2.9	1.0-2.0	0.17	0.28			
	11-24	6-10	1.30-1.40	0.6-2.0	0.07-0.11	0.0-2.9	0.0-1.0	0.20	0.32			
	24-34	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
251:												
Saska-----------------	0-6	5-10	0.60-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.28	0.32	3	3	86
	6-16	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	16-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
252:												
Saska-----------------	0-6	5-10	0.60-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.28	0.32	3	3	86
	6-16	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	16-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
253:												
Saska-----------------	0-4	5-10	0.60-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-2.0	0.28	0.32	4	3	86
	4-10	5-15	0.60-0.95	0.6-2.0	0.11-0.13	0.0-2.9	2.0-5.0	0.32	0.32			
	10-36	5-15	0.70-1.10	0.6-2.0	0.09-0.11	0.0-2.9	1.0-3.0	0.28	0.32			
	36-60	6-12	1.35-1.65	0.6-2.0	0.04-0.07	0.0-2.9	0.0-1.0	0.10	0.32			
254:												
Saska-----------------	0-4	5-10	0.60-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-2.0	0.28	0.32	4	3	86
	4-10	5-15	0.60-0.95	0.6-2.0	0.11-0.13	0.0-2.9	2.0-5.0	0.32	0.32			
	10-36	5-15	0.70-1.10	0.6-2.0	0.09-0.11	0.0-2.9	1.0-3.0	0.28	0.32			
	36-60	6-12	1.35-1.65	0.6-2.0	0.04-0.07	0.0-2.9	0.0-1.0	0.10	0.32			
255:												
Saska-----------------	0-9	5-10	0.60-0.95	0.6-2.0	0.09-0.10	0.0-2.9	0.5-2.0	0.24	0.32	3	3	86
	9-19	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	19-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
256:												
Saska-----------------	0-9	5-10	0.60-0.95	0.6-2.0	0.09-0.10	0.0-2.9	0.5-2.0	0.24	0.32	3	3	86
	9-19	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	19-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
257:												
Saska-----------------	0-6	5-10	0.60-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.28	0.32	3	3	86
	6-16	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	16-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
258:												
Saska-----------------	0-6	5-10	0.60-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.28	0.32	3	3	86
	6-16	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	16-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
Saska, bouldery-------	0-9	5-10	0.60-0.95	0.6-2.0	0.09-0.10	0.0-2.9	0.5-2.0	0.24	0.32	3	3	86
	9-19	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	19-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
259:												
Saska, south----------	0-4	5-10	0.60-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-2.0	0.28	0.32	4	3	86
	4-10	5-15	0.60-0.95	0.6-2.0	0.11-0.13	0.0-2.9	2.0-5.0	0.32	0.32			
	10-36	5-15	0.70-1.10	0.6-2.0	0.09-0.11	0.0-2.9	1.0-3.0	0.28	0.32			
	36-60	6-12	1.35-1.65	0.6-2.0	0.04-0.07	0.0-2.9	0.0-1.0	0.10	0.32			
Saska-----------------	0-9	5-10	0.60-0.95	0.6-2.0	0.09-0.10	0.0-2.9	0.5-2.0	0.24	0.32	3	3	86
	9-19	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	19-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
260:												
Saska-----------------	0-6	5-10	0.60-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.28	0.32	3	3	86
	6-16	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	16-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
Saska, bouldery-------	0-9	5-10	0.60-0.95	0.6-2.0	0.09-0.10	0.0-2.9	0.5-2.0	0.24	0.32	3	3	86
	9-19	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	19-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
261:												
Saska-----------------	0-6	5-10	0.60-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.28	0.32	3	3	86
	6-16	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	16-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
261:												
Saska, bouldery-------	0-9	5-10	0.60-0.95	0.6-2.0	0.09-0.10	0.0-2.9	0.5-2.0	0.24	0.32	3	3	86
	9-19	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	19-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
262:												
Saska, south----------	0-4	5-10	0.60-0.95	0.6-2.0	0.11-0.13	0.0-2.9	0.5-2.0	0.28	0.32	4	3	86
	4-10	5-15	0.60-0.95	0.6-2.0	0.11-0.13	0.0-2.9	2.0-5.0	0.32	0.32			
	10-36	5-15	0.70-1.10	0.6-2.0	0.09-0.11	0.0-2.9	1.0-3.0	0.28	0.32			
	36-60	6-12	1.35-1.65	0.6-2.0	0.04-0.07	0.0-2.9	0.0-1.0	0.10	0.32			
Saska-----------------	0-6	5-10	0.60-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.28	0.32	3	3	86
	6-16	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	16-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
263:												
Saydab----------------	0-8	10-16	0.65-0.90	0.6-2.0	0.05-0.07	0.0-2.9	1.0-2.0	0.15	0.28	2	8	0
	8-38	6-16	0.85-0.95	0.6-2.0	0.11-0.14	0.0-2.9	0.5-1.0	0.15	0.32			
	38-42	---	---	---	---	---	---	---	---			
264:												
Scotties--------------	0-10	10-16	0.60-1.00	0.6-2.0	0.13-0.15	0.0-2.9	0.5-1.0	0.24	0.28	3	6	48
	10-18	5-18	1.00-1.20	0.6-2.0	0.09-0.13	0.0-2.9	0.5-1.0	0.15	0.32			
	18-30	5-18	1.10-1.35	0.6-2.0	0.05-0.13	0.0-2.9	0.0-0.5	0.10	0.32			
	30-44	5-15	1.25-1.45	0.6-2.0	0.05-0.09	0.0-2.9	0.0-0.5	0.10	0.32			
	44-48	---	---	---	---	---	---	---	---			
265:												
Serene----------------	0-4	5-10	0.70-0.95	0.6-2.0	0.10-0.12	0.0-2.9	6.0-10	0.15	0.24	2	4	86
	4-8	5-10	0.75-1.00	0.6-2.0	0.08-0.10	0.0-2.9	0.5-1.0	0.10	0.24			
	8-13	2-10	0.85-1.00	2.0-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.10	0.24			
	13-24	0-2	1.35-1.65	6.0-20.0	0.04-0.05	0.0-2.9	0.0-0.5	0.02	0.28			
	24-34	---	---	---	---	---	---	---	---			
266:												
Serene----------------	0-4	5-10	0.70-0.95	0.6-2.0	0.10-0.12	0.0-2.9	6.0-10	0.15	0.24	2	4	86
	4-8	5-10	0.75-1.00	0.6-2.0	0.08-0.10	0.0-2.9	0.5-1.0	0.10	0.24			
	8-13	2-10	0.85-1.00	2.0-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.10	0.24			
	13-24	0-2	1.35-1.65	6.0-20.0	0.04-0.05	0.0-2.9	0.0-0.5	0.02	0.28			
	24-34	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
267:												
Serpen----------------	0-10	15-20	1.15-1.35	0.6-2.0	0.10-0.12	0.0-2.9	1.0-2.0	0.15	0.28	3	7	38
	10-34	27-35	1.30-1.40	0.06-0.2	0.08-0.10	3.0-5.9	0.5-1.0	0.10	0.28			
	34-48	27-35	1.30-1.40	0.06-0.2	0.07-0.09	3.0-5.9	0.0-0.5	0.10	0.28			
	48-52	---	---	---	---	---	---	---	---			
268:												
Serpen----------------	0-10	15-20	1.15-1.35	0.6-2.0	0.10-0.12	0.0-2.9	1.0-2.0	0.15	0.28	3	7	38
	10-34	27-35	1.30-1.40	0.06-0.2	0.08-0.10	3.0-5.9	0.5-1.0	0.10	0.28			
	34-48	27-35	1.30-1.40	0.06-0.2	0.07-0.09	3.0-5.9	0.0-0.5	0.10	0.28			
	48-52	---	---	---	---	---	---	---	---			
269:												
Shadypass-------------	0-3	5-10	0.65-0.85	6.0-20.0	0.15-0.20	0.0-2.9	1.0-3.0	0.20	0.28	2	5	56
	3-19	4-12	0.65-0.85	6.0-20.0	0.14-0.18	0.0-2.9	0.5-1.0	0.10	0.28			
	19-60	0-2	0.45-0.75	20.0-100.0	0.10-0.14	0.0-2.9	0.0-0.5	0.02	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
270:												
Shamel	0-11	5-10	1.10-1.30	0.6-2.0	0.15-0.18	0.0-2.9	1.0-3.0	0.24	0.28	5	3	86
	11-17	5-15	1.25-1.45	0.6-2.0	0.15-0.19	0.0-2.9	0.5-1.0	0.20	0.37			
	17-38	5-15	1.25-1.45	0.6-2.0	0.14-0.18	0.0-2.9	0.0-0.5	0.20	0.37			
	38-60	5-15	1.25-1.45	0.6-2.0	0.10-0.16	0.0-2.9	0.0-0.5	0.17	0.37			
271:												
Shamel	0-11	5-10	1.10-1.30	0.6-2.0	0.15-0.18	0.0-2.9	1.0-3.0	0.24	0.28	5	3	86
	11-17	5-15	1.25-1.45	0.6-2.0	0.15-0.19	0.0-2.9	0.5-1.0	0.20	0.37			
	17-38	5-15	1.25-1.45	0.6-2.0	0.14-0.18	0.0-2.9	0.0-0.5	0.20	0.37			
	38-60	5-15	1.25-1.45	0.6-2.0	0.10-0.16	0.0-2.9	0.0-0.5	0.17	0.37			
272:												
Shamel	0-11	5-10	1.10-1.30	0.6-2.0	0.15-0.18	0.0-2.9	1.0-3.0	0.24	0.28	5	3	86
	11-17	5-15	1.25-1.45	0.6-2.0	0.15-0.19	0.0-2.9	0.5-1.0	0.20	0.37			
	17-38	5-15	1.25-1.45	0.6-2.0	0.14-0.18	0.0-2.9	0.0-0.5	0.20	0.37			
	38-60	5-15	1.25-1.45	0.6-2.0	0.10-0.16	0.0-2.9	0.0-0.5	0.17	0.37			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
273:												
Shaser	0-9	6-14	0.75-0.85	0.6-2.0	0.15-0.18	0.0-2.9	0.5-1.0	0.32	0.32	5	3	86
	9-18	6-16	0.80-1.00	0.6-2.0	0.10-0.16	0.0-2.9	0.5-1.0	0.24	0.32			
	18-46	27-35	1.30-1.40	0.2-0.6	0.07-0.12	3.0-5.9	0.0-0.5	0.15	0.28			
	46-60	20-30	1.35-1.50	0.2-0.6	0.07-0.11	3.0-5.9	0.0-0.5	0.10	0.28			
Blewett	0-3	5-10	1.10-1.30	0.6-2.0	0.05-0.08	0.0-2.9	1.0-3.0	0.10	0.32	1	6	48
	3-10	5-12	1.20-1.45	0.6-2.0	0.04-0.08	0.0-2.9	1.0-3.0	0.10	0.32			
	10-14	---	---	---	---	---	---	---	---			
274:												
Shaser	0-9	6-14	0.75-0.85	0.6-2.0	0.15-0.18	0.0-2.9	0.5-1.0	0.32	0.32	5	3	86
	9-18	6-16	0.80-1.00	0.6-2.0	0.10-0.16	0.0-2.9	0.5-1.0	0.24	0.32			
	18-46	27-35	1.30-1.40	0.2-0.6	0.07-0.12	3.0-5.9	0.0-0.5	0.15	0.28			
	46-60	20-30	1.35-1.50	0.2-0.6	0.07-0.11	3.0-5.9	0.0-0.5	0.10	0.28			
Brisky	0-4	5-15	1.10-1.30	0.6-2.0	0.07-0.10	0.0-2.9	1.0-3.0	0.10	0.32	1	6	48
	4-10	5-15	1.20-1.45	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.15	0.37			
	10-14	---	---	---	---	---	---	---	---			
275:												
Shaser	0-9	6-14	0.75-0.85	0.6-2.0	0.15-0.18	0.0-2.9	0.5-1.0	0.32	0.32	5	3	86
	9-18	6-16	0.80-1.00	0.6-2.0	0.10-0.16	0.0-2.9	0.5-1.0	0.24	0.32			
	18-46	27-35	1.30-1.40	0.2-0.6	0.07-0.12	3.0-5.9	0.0-0.5	0.15	0.28			
	46-60	20-30	1.35-1.50	0.2-0.6	0.07-0.11	3.0-5.9	0.0-0.5	0.10	0.28			
Chapot	0-6	5-10	0.75-0.85	0.6-2.0	0.10-0.15	0.0-2.9	1.0-3.0	0.28	0.32	5	4	86
	6-14	10-20	1.10-1.30	0.6-2.0	0.10-0.15	0.0-2.9	0.5-1.0	0.24	0.32			
	14-24	20-30	1.25-1.45	0.6-2.0	0.08-0.15	0.0-2.9	0.0-0.5	0.10	0.32			
	24-60	27-35	1.25-1.45	0.2-0.6	0.07-0.14	3.0-5.9	0.0-0.5	0.05	0.28			
276:												
Skipeak	0-7	5-10	0.70-0.85	2.0-6.0	0.09-0.12	0.0-2.9	2.0-3.0	0.15	0.24	5	4	86
	7-17	6-16	0.80-0.90	6.0-20.0	0.07-0.10	0.0-2.9	1.0-2.0	0.10	0.24			
	17-60	3-5	1.45-1.60	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.20			
277:												
Skipeak	0-7	5-10	0.70-0.85	2.0-6.0	0.09-0.12	0.0-2.9	2.0-3.0	0.15	0.24	5	4	86
	7-17	6-16	0.80-0.90	6.0-20.0	0.07-0.10	0.0-2.9	1.0-2.0	0.10	0.24			
	17-60	3-5	1.45-1.60	6.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	0.20			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
277:												
Line	0-4	6-14	0.80-0.85	0.6-2.0	0.19-0.22	0.0-2.9	0.5-2.0	0.24	0.28	2	4	86
	4-15	5-15	0.80-0.85	0.6-2.0	0.17-0.20	0.0-2.9	0.5-1.0	0.20	0.28			
	15-60	0-2	1.80-2.00	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.05	0.24			
278:												
Soda	0-11	5-10	0.80-1.00	0.6-2.0	0.12-0.14	0.0-2.9	0.0-1.0	0.32	0.32	4	3	86
	11-25	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	25-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			
279:												
Soda	0-3	5-10	0.80-1.00	0.6-2.0	0.12-0.14	0.0-2.9	0.0-1.0	0.32	0.32	3	3	86
	3-18	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	18-28	5-15	0.80-1.00	0.6-2.0	0.07-0.09	0.0-2.9	1.0-2.0	0.15	0.37			
	28-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			
280:												
Soda	0-8	5-10	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	0.0-1.0	0.28	0.32	4	4	86
	8-22	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	22-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			
281:												
Soda	0-10	6-14	0.80-0.95	0.6-2.0	0.15-0.17	0.0-2.9	3.0-6.0	0.32	0.37	3	3	86
	10-18	5-15	0.80-0.95	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.28	0.37			
	18-50	5-15	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	50-60	---	1.60-1.80	0.0-0.06	0.02-0.04	---	---	---	---			
282:												
Soda	0-10	6-14	0.80-0.95	0.6-2.0	0.15-0.17	0.0-2.9	3.0-6.0	0.32	0.37	3	3	86
	10-18	5-15	0.80-0.95	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.28	0.37			
	18-50	5-15	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	50-60	---	0.60-0.80	0.0-0.06	0.02-0.04	---	---	---	---			
283:												
Soda	0-10	6-14	0.80-0.95	0.6-2.0	0.15-0.17	0.0-2.9	3.0-6.0	0.32	0.37	3	3	86
	10-18	5-15	0.80-0.95	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.28	0.37			
	18-50	5-15	0.80-0.95	0.6-2.0	0.10-0.12	0.0-2.9	1.0-2.0	0.20	0.37			
	50-60	---	0.60-0.80	0.0-0.06	0.02-0.04	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
284:												
Soda	0-8	5-10	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	0.0-1.0	0.28	0.32	4	4	86
	8-22	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	22-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
285:												
Soda	0-11	5-10	0.80-1.00	0.6-2.0	0.12-0.14	0.0-2.9	0.0-1.0	0.32	0.32	4	3	86
	11-25	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	25-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			
Soda, cold	0-8	5-10	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	0.0-1.0	0.28	0.32	4	3	86
	8-22	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	22-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			
286:												
Soda	0-11	5-10	0.80-1.00	0.6-2.0	0.12-0.14	0.0-2.9	0.0-1.0	0.32	0.32	4	3	86
	11-25	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	25-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
286:												
Soda, cold	0-8	5-10	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	0.0-1.0	0.28	0.32	4	3	86
	8-22	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	22-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			
287:												
Soda	0-8	5-10	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	0.0-1.0	0.28	0.32	4	4	86
	8-22	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	22-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			
Soda, cold	0-11	5-10	0.80-1.00	0.6-2.0	0.12-0.14	0.0-2.9	0.0-1.0	0.32	0.32	4	3	86
	11-25	5-15	0.80-1.00	0.6-2.0	0.11-0.13	0.0-2.9	3.0-6.0	0.20	0.32			
	25-60	5-10	1.30-1.50	0.6-2.0	0.04-0.06	0.0-2.9	0.0-1.0	0.10	0.37			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
288:												
Sodacreek	0-9	6-14	0.85-1.00	0.6-2.0	0.14-0.16	0.0-2.9	0.0-0.5	0.32	0.32	5	3	86
	9-20	5-15	0.85-1.00	0.6-2.0	0.14-0.16	0.0-2.9	0.0-0.5	0.17	0.28			
	20-60	7-12	1.25-1.45	0.6-2.0	0.06-0.09	0.0-2.9	0.0-0.5	0.15	0.37			
289:												
Sodacreek	0-9	6-14	0.85-1.00	0.6-2.0	0.14-0.16	0.0-2.9	0.0-0.5	0.32	0.32	5	3	86
	9-20	5-15	0.85-1.00	0.6-2.0	0.14-0.16	0.0-2.9	0.0-0.5	0.17	0.28			
	20-60	7-12	1.25-1.45	0.6-2.0	0.06-0.09	0.0-2.9	0.0-0.5	0.15	0.37			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
290:												
Spodic Vitrixerands	0-7	5-10	0.70-0.85	0.6-2.0	0.13-0.15	0.0-2.9	0.0-0.5	0.43	0.43	5	3	86
	7-17	2-10	0.70-0.85	0.6-6.0	0.10-0.12	0.0-2.9	0.5-1.0	0.24	0.43			
	17-60	8-15	1.30-1.40	0.6-2.0	0.17-0.20	0.0-2.9	0.0-0.5	0.49	0.49			
Saska	0-6	5-10	0.60-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.28	0.32	3	3	86
	6-16	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	16-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
291:												
Spodic Vitrixerands	0-7	5-10	0.70-0.85	0.6-2.0	0.13-0.15	0.0-2.9	0.0-0.5	0.43	0.43	5	3	86
	7-17	2-10	0.70-0.85	0.6-6.0	0.10-0.12	0.0-2.9	0.5-1.0	0.24	0.43			
	17-60	8-15	1.30-1.40	0.6-2.0	0.17-0.20	0.0-2.9	0.0-0.5	0.49	0.49			
Saska	0-6	5-10	0.60-0.95	0.6-2.0	0.10-0.12	0.0-2.9	0.5-2.0	0.28	0.32	3	3	86
	6-16	2-10	0.70-1.00	0.6-2.0	0.10-0.12	0.0-2.9	1.0-3.0	0.32	0.37			
	16-60	6-12	1.35-1.65	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.10	0.37			
292:												
Stemilt	0-10	10-20	1.10-1.30	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.28	0.32	5	6	48
	10-18	15-27	1.25-1.40	0.6-2.0	0.10-0.13	0.0-2.9	1.0-2.0	0.20	0.32			
	18-60	27-35	1.30-1.50	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	0.05	0.24			
293:												
Stemilt	0-10	10-20	1.10-1.30	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.28	0.32	5	6	48
	10-18	15-27	1.25-1.40	0.6-2.0	0.10-0.13	0.0-2.9	1.0-2.0	0.20	0.32			
	18-60	27-35	1.30-1.50	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	0.05	0.24			
294:												
Surgh	0-3	6-14	0.60-0.85	0.6-2.0	0.16-0.28	0.0-2.9	0.5-1.0	0.37	0.37	3	3	86
	3-13	6-14	0.60-0.85	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.20	0.37			
	13-21	5-10	0.85-1.10	0.6-2.0	0.10-0.14	0.0-2.9	0.0-0.5	0.05	0.37			
	21-46	5-10	0.85-1.10	0.6-2.0	0.04-0.06	0.0-2.9	0.0-0.5	0.02	0.37			
	46-50	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
295:												
Surgh	0-3	6-14	0.60-0.85	0.6-2.0	0.16-0.28	0.0-2.9	0.5-1.0	0.37	0.37	3	3	86
	3-13	6-14	0.60-0.85	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.20	0.37			
	13-21	5-10	0.85-1.10	0.6-2.0	0.10-0.14	0.0-2.9	0.0-0.5	0.05	0.37			
	21-46	5-10	0.85-1.10	0.6-2.0	0.04-0.06	0.0-2.9	0.0-0.5	0.02	0.37			
	46-50	---	---	---	---	---	---	---	---			
296:												
Surgh	0-3	6-14	0.60-0.85	0.6-2.0	0.16-0.28	0.0-2.9	0.5-1.0	0.37	0.37	3	3	86
	3-13	6-14	0.60-0.85	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.20	0.37			
	13-21	5-10	0.85-1.10	0.6-2.0	0.10-0.14	0.0-2.9	0.0-0.5	0.05	0.37			
	21-46	5-10	0.85-1.10	0.6-2.0	0.04-0.06	0.0-2.9	0.0-0.5	0.02	0.37			
	46-50	---	---	---	---	---	---	---	---			
297:												
Surgh	0-12	6-14	0.75-0.85	0.6-2.0	0.16-0.18	0.0-2.9	0.5-2.0	0.20	0.32	5	5	56
	12-41	2-5	0.95-1.25	0.6-2.0	0.10-0.14	0.0-2.9	0.5-1.0	0.15	0.32			
	41-60	2-5	1.10-1.45	0.6-2.0	0.04-0.06	0.0-2.9	0.0-0.5	0.10	0.32			
Wedge	0-5	5-10	0.65-0.85	2.0-6.0	0.09-0.12	0.0-2.9	0.5-2.0	0.15	0.28	3	4	86
	5-11	5-15	0.65-0.85	2.0-6.0	0.05-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	11-31	2-10	0.65-0.85	2.0-6.0	0.09-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	31-60	0-2	0.65-0.85	20.0-100.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	---			
298:												
Swakane	0-2	5-10	1.35-1.45	0.6-2.0	0.09-0.10	0.0-2.9	1.0-3.0	0.17	0.28	1	4	86
	2-15	5-15	1.45-1.55	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.10	0.32			
	15-19	---	---	---	---	---	---	---	---			
299:												
Swakane	0-2	5-10	1.35-1.45	0.6-2.0	0.09-0.10	0.0-2.9	1.0-3.0	0.17	0.28	1	4	86
	2-15	5-15	1.45-1.55	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.10	0.32			
	15-19	---	---	---	---	---	---	---	---			
300:												
Swakane	0-5	5-10	1.35-1.45	0.6-2.0	0.09-0.10	0.0-2.9	1.0-3.0	0.17	0.28	1	4	86
	5-16	5-15	1.45-1.55	0.6-2.0	0.04-0.09	0.0-2.9	0.5-1.0	0.10	0.32			
	16-20	---	---	---	---	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
301:												
Swakane	0-2	5-10	1.35-1.45	0.6-2.0	0.09-0.10	0.0-2.9	1.0-3.0	0.17	0.28	1	4	86
	2-15	5-15	1.45-1.55	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.10	0.32			
	15-19	---	---	---	---	---	---	---	---			
Rock outcrop	0-60	---	---	---	---	---	---	---	---			
302:												
Switchback	0-10	5-15	1.15-1.35	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.20	0.37	3	4	86
	10-20	5-15	1.25-1.45	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.43			
	20-26	5-15	1.25-1.50	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.43			
	26-36	---	---	---	---	---	---	---	---			
303:												
Switchback	0-10	5-15	1.15-1.35	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.20	0.37	3	4	86
	10-20	5-15	1.25-1.45	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.43			
	20-26	5-15	1.25-1.50	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.43			
	26-36	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
304:												
Switchback------------	0-10	5-15	1.15-1.35	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.20	0.37	3	4	86
	10-20	5-15	1.25-1.45	0.6-2.0	0.11-0.13	0.0-2.9	0.5-1.0	0.15	0.43			
	20-26	5-15	1.25-1.50	0.6-2.0	0.10-0.12	0.0-2.9	0.0-0.5	0.15	0.43			
	26-36	---	---	---	---	---	---	---	---			
305:												
Taneum----------------	0-16	15-18	1.15-1.30	0.6-2.0	0.15-0.18	0.0-2.9	2.0-4.0	0.37	0.43	3	5	56
	16-21	18-30	1.30-1.40	0.06-0.2	0.14-0.17	3.0-5.9	1.0-2.0	0.28	0.49			
	21-47	25-35	1.35-1.45	0.06-0.2	0.12-0.14	3.0-5.9	0.5-1.0	0.20	0.32			
	47-58	25-35	1.35-1.45	0.06-0.2	0.07-0.09	3.0-5.9	0.0-0.5	0.05	0.32			
	58-62	---	---	---	---	---	---	---	---			
306:												
Thow------------------	0-8	6-14	0.70-0.85	0.6-2.0	0.11-0.15	0.0-2.9	1.0-2.0	0.28	0.37	4	2	134
	8-22	5-15	0.75-0.90	0.6-2.0	0.09-0.12	0.0-2.9	0.0-0.5	0.28	0.37			
	22-42	5-10	0.75-1.00	0.6-2.0	0.07-0.10	0.0-2.9	0.0-0.5	0.28	0.37			
	42-60	0-5	1.40-1.75	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.24			
307:												
Thow------------------	0-8	6-14	0.70-0.85	0.6-2.0	0.11-0.15	0.0-2.9	1.0-2.0	0.28	0.37	4	2	134
	8-22	5-15	0.75-0.90	0.6-2.0	0.09-0.12	0.0-2.9	0.0-0.5	0.28	0.37			
	22-42	5-10	0.75-1.00	0.6-2.0	0.07-0.10	0.0-2.9	0.0-0.5	0.28	0.37			
	42-60	0-5	1.40-1.75	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.24			
308:												
Thow------------------	0-8	6-14	0.70-0.85	0.6-2.0	0.11-0.15	0.0-2.9	1.0-2.0	0.28	0.37	4	2	134
	8-22	5-15	0.75-0.90	0.6-2.0	0.09-0.12	0.0-2.9	0.0-0.5	0.28	0.37			
	22-42	5-10	0.75-1.00	0.6-2.0	0.07-0.10	0.0-2.9	0.0-0.5	0.28	0.37			
	42-60	0-5	1.40-1.75	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.24			
309:												
Thow------------------	0-8	6-14	0.70-0.85	0.6-2.0	0.11-0.15	0.0-2.9	1.0-2.0	0.28	0.37	4	2	134
	8-22	5-15	0.75-0.90	0.6-2.0	0.09-0.12	0.0-2.9	0.0-0.5	0.28	0.37			
	22-42	5-10	0.75-1.00	0.6-2.0	0.07-0.10	0.0-2.9	0.0-0.5	0.28	0.37			
	42-60	0-5	1.40-1.75	20.0-100.0	0.02-0.04	0.0-2.9	0.0-0.5	0.02	0.24			
Domkey----------------	0-3	6-14	0.65-0.85	0.6-2.0	0.10-0.14	0.0-2.9	1.0-2.0	0.20	0.24	4	3	86
	3-10	5-15	0.65-0.85	0.6-2.0	0.12-0.14	0.0-2.9	0.5-1.0	0.24	0.24			
	10-18	5-15	0.65-0.85	0.6-2.0	0.11-0.13	0.0-2.9	0.0-0.5	0.24	0.28			
	18-35	5-10	0.65-0.85	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.32	0.32			
	35-45	5-10	1.30-1.50	2.0-6.0	0.05-0.06	0.0-2.9	0.0-0.5	0.10	0.28			
	45-55	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
310:												
Thowson---------------	0-14	6-14	0.65-0.85	0.6-2.0	0.15-0.18	0.0-2.9	1.0-2.0	0.37	0.37	4	2	134
	14-34	5-15	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	34-45	5-15	0.65-0.85	0.6-2.0	0.12-0.16	0.0-2.9	0.0-0.5	0.10	0.37			
	45-60	5-9	1.20-1.40	20.0-100.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.37			
311:												
Thowson---------------	0-14	6-14	0.65-0.85	0.6-2.0	0.15-0.18	0.0-2.9	1.0-2.0	0.37	0.37	4	2	134
	14-34	5-15	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	34-45	5-15	0.65-0.85	0.6-2.0	0.12-0.16	0.0-2.9	0.0-0.5	0.10	0.37			
	45-60	5-9	1.20-1.40	20.0-100.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.37			
312:												
Thowson---------------	0-14	6-14	0.65-0.85	0.6-2.0	0.15-0.18	0.0-2.9	1.0-2.0	0.37	0.37	4	2	134
	14-34	5-15	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	34-45	5-15	0.65-0.85	0.6-2.0	0.12-0.16	0.0-2.9	0.0-0.5	0.10	0.37			
	45-60	5-9	1.20-1.40	20.0-100.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
313:												
Thowson---------------	0-14	6-14	0.65-0.85	0.6-2.0	0.15-0.18	0.0-2.9	1.0-2.0	0.37	0.37	4	2	134
	14-34	5-15	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	34-45	5-15	0.65-0.85	0.6-2.0	0.12-0.16	0.0-2.9	0.0-0.5	0.10	0.37			
	45-60	5-9	1.20-1.40	20.0-100.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.37			
314:												
Thowson---------------	0-7	6-14	0.65-0.85	0.6-2.0	0.14-0.17	0.0-2.9	1.0-2.0	0.24	0.37	4	3	86
	7-42	6-14	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	42-60	5-9	1.20-1.40	20.0-100.0	0.03-0.05	0.0-2.9	0.0-1.0	0.05	0.37			
315:												
Thowson---------------	0-7	6-14	0.65-0.85	0.6-2.0	0.14-0.17	0.0-2.9	1.0-2.0	0.24	0.37	4	3	86
	7-42	6-14	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	42-60	5-9	1.20-1.40	20.0-100.0	0.03-0.05	0.0-2.9	0.0-1.0	0.05	0.37			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
316:												
Thowson---------------	0-7	6-14	0.65-0.85	0.6-2.0	0.14-0.17	0.0-2.9	1.0-2.0	0.24	0.37	4	3	86
	7-42	6-14	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	42-60	5-9	1.20-1.40	20.0-100.0	0.03-0.05	0.0-2.9	0.0-1.0	0.05	0.37			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
317:												
Thowson---------------	0-7	6-14	0.65-0.85	0.6-2.0	0.14-0.17	0.0-2.9	1.0-2.0	0.24	0.37	4	3	86
	7-42	6-14	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	42-60	5-9	1.20-1.40	20.0-100.0	0.03-0.05	0.0-2.9	0.0-1.0	0.05	0.37			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
318:												
Thowson, stony--------	0-7	6-14	0.65-0.85	0.6-2.0	0.14-0.17	0.0-2.9	1.0-2.0	0.24	0.37	4	3	86
	7-42	6-14	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	42-60	5-9	1.20-1.40	20.0-100.0	0.03-0.05	0.0-2.9	0.0-1.0	0.05	0.37			
Thowson---------------	0-14	6-14	0.65-0.85	0.6-2.0	0.15-0.18	0.0-2.9	1.0-2.0	0.37	0.37	4	2	134
	14-34	5-15	0.65-0.85	0.6-2.0	0.13-0.18	0.0-2.9	1.0-2.0	0.37	0.37			
	34-45	5-15	0.65-0.85	0.6-2.0	0.12-0.16	0.0-2.9	0.0-0.5	0.10	0.37			
	45-60	5-9	1.20-1.40	20.0-100.0	0.03-0.04	0.0-2.9	0.0-0.5	0.05	0.37			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
319:												
Tillicum--------------	0-5	5-10	0.65-0.85	0.6-2.0	0.13-0.16	0.0-2.9	0.5-2.0	0.24	0.28	3	3	86
	5-22	5-15	0.85-1.00	0.6-2.0	0.13-0.17	0.0-2.9	0.5-1.0	0.32	0.37			
	22-40	5-10	1.30-1.55	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.17	0.37			
	40-44	---	---	---	---	---	---	---	---			
320:												
Tillicum--------------	0-8	6-14	0.65-0.85	0.6-2.0	0.15-0.17	0.0-2.9	0.5-2.0	0.32	0.32	3	3	86
	8-24	5-15	0.85-1.00	0.6-2.0	0.13-0.17	0.0-2.9	0.5-1.0	0.32	0.37			
	24-42	5-10	1.30-1.55	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.17	0.37			
	42-46	---	---	---	---	---	---	---	---			
321:												
Tillicum--------------	0-8	6-14	0.65-0.85	0.6-2.0	0.15-0.17	0.0-2.9	0.5-2.0	0.32	0.32	3	3	86
	8-24	5-15	0.85-1.00	0.6-2.0	0.13-0.17	0.0-2.9	0.5-1.0	0.32	0.37			
	24-42	5-10	1.30-1.55	2.0-6.0	0.05-0.07	0.0-2.9	0.0-0.5	0.17	0.37			
	42-46	---	---	---	---	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
322:												
Tillmont--------------	0-6	5-10	0.70-0.85	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.24	0.28	3	4	86
	6-20	5-10	0.75-0.90	0.6-2.0	0.11-0.16	0.0-2.9	0.5-1.0	0.20	0.28			
	20-34	0-2	0.80-0.90	6.0-20.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	---			
	34-38	0-5	0.90-1.00	6.0-20.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.17			
	38-46	8-12	1.40-1.50	0.6-2.0	0.00-0.04	0.0-2.9	0.0-0.5	0.05	0.28			
	46-50	---	---	---	---	---	---	---	---			
323:												
Tillmont--------------	0-6	5-10	0.70-0.85	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.24	0.28	3	4	86
	6-20	5-10	0.75-0.90	0.6-2.0	0.11-0.16	0.0-2.9	0.5-1.0	0.20	0.28			
	20-34	0-2	0.80-0.90	6.0-20.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	---			
	34-38	0-5	0.90-1.00	6.0-20.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.17			
	38-46	8-12	1.40-1.50	0.6-2.0	0.00-0.04	0.0-2.9	0.0-0.5	0.05	0.28			
	46-50	---	---	---	---	---	---	---	---			
324:												
Tillmont--------------	0-6	5-10	0.70-0.85	0.6-2.0	0.14-0.18	0.0-2.9	0.5-1.0	0.24	0.28	3	4	86
	6-20	5-10	0.75-0.90	0.6-2.0	0.11-0.16	0.0-2.9	0.5-1.0	0.20	0.28			
	20-34	0-2	0.80-0.90	6.0-20.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	---			
	34-38	0-5	0.90-1.00	6.0-20.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.17			
	38-46	8-12	1.40-1.50	0.6-2.0	0.00-0.04	0.0-2.9	0.0-0.5	0.05	0.28			
	46-50	---	---	---	---	---	---	---	---			
Inkler----------------	0-4	5-10	0.65-0.85	0.6-2.0	0.08-0.10	0.0-2.9	1.0-2.0	0.17	0.32	2	3	86
	4-10	5-15	1.45-1.55	0.6-2.0	0.06-0.11	0.0-2.9	0.5-1.0	0.10	0.37			
	10-29	5-15	1.45-1.55	6.0-20.0	0.03-0.10	0.0-2.9	0.0-0.5	0.05	0.37			
	29-44	0-10	1.55-1.65	6.0-20.0	0.02-0.07	0.0-2.9	0.0-0.5	0.02	0.28			
	44-48	---	---	---	---	---	---	---	---			
325:												
Tiptop----------------	0-2	10-16	0.80-0.95	0.6-2.0	0.13-0.16	0.0-2.9	1.0-3.0	0.15	0.32	5	7	38
	2-28	8-16	0.80-0.95	0.6-2.0	0.10-0.13	0.0-2.9	0.5-1.0	0.10	0.32			
	28-60	5-15	0.85-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
326:												
Tiptop----------------	0-2	10-16	0.80-0.95	0.6-2.0	0.13-0.16	0.0-2.9	1.0-3.0	0.15	0.32	5	7	38
	2-28	8-16	0.80-0.95	0.6-2.0	0.10-0.13	0.0-2.9	0.5-1.0	0.10	0.32			
	28-60	5-15	0.85-1.00	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
Naxing----------------	0-10	10-16	0.70-0.95	0.6-2.0	0.09-0.12	0.0-2.9	1.0-3.0	0.15	0.32	5	7	38
	10-29	6-16	0.85-0.95	0.6-2.0	0.05-0.06	0.0-2.9	0.0-1.0	0.05	0.37			
	29-60	6-16	0.85-1.00	0.6-2.0	0.06-0.07	0.0-2.9	0.0-0.5	0.05	0.37			
327:												
Totem-----------------	0-6	5-10	0.85-1.00	0.6-2.0	0.13-0.15	0.0-2.9	1.0-4.0	0.24	0.28	4	3	86
	6-25	6-16	0.85-1.00	0.6-2.0	0.10-0.15	0.0-2.9	0.5-1.0	0.24	0.28			
	25-33	5-10	0.85-1.00	6.0-20.0	0.03-0.08	0.0-2.9	0.0-0.5	0.05	0.28			
	33-60	0-2	0.90-1.00	6.0-20.0	0.03-0.08	0.0-2.9	0.0-0.5	0.05	---			
328:												
Totem-----------------	0-6	5-10	0.85-1.00	0.6-2.0	0.13-0.15	0.0-2.9	1.0-4.0	0.24	0.28	4	3	86
	6-25	6-16	0.85-1.00	0.6-2.0	0.10-0.15	0.0-2.9	0.5-1.0	0.24	0.28			
	25-33	5-10	0.85-1.00	6.0-20.0	0.03-0.08	0.0-2.9	0.0-0.5	0.05	0.28			
	33-60	0-2	0.90-1.00	6.0-20.0	0.03-0.08	0.0-2.9	0.0-0.5	0.05	---			
329:												
Totem-----------------	0-6	5-10	0.85-1.00	0.6-2.0	0.13-0.15	0.0-2.9	1.0-4.0	0.24	0.28	4	3	86
	6-25	6-16	0.85-1.00	0.6-2.0	0.10-0.15	0.0-2.9	0.5-1.0	0.24	0.28			
	25-33	5-10	0.85-1.00	6.0-20.0	0.03-0.08	0.0-2.9	0.0-0.5	0.05	0.28			
	33-60	0-2	0.90-1.00	6.0-20.0	0.03-0.08	0.0-2.9	0.0-0.5	0.05	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
330:												
Totem-----------------	0-6	5-10	0.85-1.00	0.6-2.0	0.13-0.15	0.0-2.9	1.0-4.0	0.24	0.28	4	3	86
	6-25	6-16	0.85-1.00	0.6-2.0	0.10-0.15	0.0-2.9	0.5-1.0	0.24	0.28			
	25-33	5-10	0.85-1.00	6.0-20.0	0.03-0.08	0.0-2.9	0.0-0.5	0.05	0.28			
	33-60	0-2	0.90-1.00	6.0-20.0	0.03-0.08	0.0-2.9	0.0-0.5	0.05	---			
Chiwaukum-------------	0-5	4-14	0.85-1.10	0.6-2.0	0.12-0.14	0.0-2.9	2.0-6.0	0.32	0.37	4	3	86
	5-17	5-15	0.85-1.10	0.6-2.0	0.09-0.12	0.0-2.9	1.0-3.0	0.17	0.32			
	17-26	4-12	0.85-1.10	0.6-2.0	0.08-0.11	0.0-2.9	0.5-1.0	0.17	0.32			
	26-60	2-10	1.25-1.50	0.6-2.0	0.03-0.05	0.0-2.9	0.0-0.5	0.05	0.32			
331:												
Treen-----------------	0-11	6-14	0.65-0.85	0.6-2.0	0.15-0.17	0.0-2.9	6.0-10	0.24	0.24	1	3	86
	11-16	8-16	1.10-1.25	2.0-6.0	0.08-0.10	0.0-2.9	0.5-1.0	0.24	0.28			
	16-20	---	---	---	---	---	---	---	---			
332:												
Treen-----------------	0-11	6-14	0.65-0.85	0.6-2.0	0.15-0.17	0.0-2.9	6.0-10	0.24	0.24	1	3	86
	11-16	8-16	1.10-1.25	2.0-6.0	0.08-0.10	0.0-2.9	0.5-1.0	0.24	0.28			
	16-20	---	---	---	---	---	---	---	---			
Klapatche-------------	0-4	2-8	0.60-0.85	2.0-6.0	0.06-0.08	0.0-2.9	6.0-10	0.10	0.17	3	2	134
	4-12	2-10	0.60-1.00	2.0-6.0	0.09-0.11	0.0-2.9	3.0-5.0	0.24	0.28			
	12-26	0-8	1.00-1.30	20.0-100.0	0.03-0.05	0.0-2.9	0.5-1.0	0.05	0.20			
	26-37	0-6	1.20-1.50	20.0-100.0	0.01-0.02	0.0-2.9	0.5-1.0	0.02	0.20			
	37-47	---	---	---	---	---	---	---	---			
333:												
Tronsen---------------	0-9	15-20	1.15-1.30	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.24	0.43	5	6	48
	9-30	35-50	1.20-1.40	0.06-0.6	0.10-0.12	3.0-5.9	0.5-1.0	0.15	0.37			
	30-60	35-50	1.30-1.50	0.06-0.2	0.05-0.10	6.0-8.9	0.0-0.5	0.10	0.37			
334:												
Tronsen---------------	0-9	15-20	1.15-1.30	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.24	0.43	5	6	48
	9-30	35-50	1.20-1.40	0.06-0.6	0.10-0.12	3.0-5.9	0.5-1.0	0.15	0.37			
	30-60	35-50	1.30-1.50	0.06-0.2	0.05-0.10	6.0-8.9	0.0-0.5	0.10	0.37			
335:												
Tyee------------------	0-5	2-5	1.25-1.45	2.0-6.0	0.07-0.10	0.0-2.9	1.0-2.0	0.10	0.20	2	2	134
	5-12	3-5	1.35-1.55	0.6-2.0	0.09-0.13	0.0-2.9	0.5-1.0	0.15	0.37			
	12-16	---	---	---	---	---	---	---	---			
336:												
Tyee------------------	0-11	3-10	1.20-1.40	2.0-6.0	0.12-0.16	0.0-2.9	1.0-3.0	0.17	0.32	2	4	86
	11-19	3-5	1.35-1.55	0.6-2.0	0.09-0.13	0.0-2.9	0.5-1.0	0.15	0.37			
	19-29	---	---	---	---	---	---	---	---			
337:												
Tyee------------------	0-11	3-10	1.20-1.40	2.0-6.0	0.12-0.16	0.0-2.9	1.0-3.0	0.17	0.32	2	4	86
	11-19	3-5	1.35-1.55	0.6-2.0	0.09-0.13	0.0-2.9	0.5-1.0	0.15	0.37			
	19-29	---	---	---	---	---	---	---	---			
338:												
Tyee------------------	0-11	3-10	1.20-1.40	2.0-6.0	0.12-0.16	0.0-2.9	1.0-3.0	0.17	0.32	2	4	86
	11-19	3-5	1.35-1.55	0.6-2.0	0.09-0.13	0.0-2.9	0.5-1.0	0.15	0.37			
	19-29	---	---	---	---	---	---	---	---			
Bisping---------------	0-4	6-14	0.65-0.85	0.6-2.0	0.18-0.20	0.0-2.9	2.0-3.0	0.37	0.37	5	4	86
	4-30	5-15	0.65-0.85	0.6-2.0	0.16-0.18	0.0-2.9	2.0-3.0	0.20	0.37			
	30-60	12-18	1.10-1.20	0.6-2.0	0.14-0.16	0.0-2.9	0.5-1.0	0.32	0.43			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea-bility (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
339:												
Typic Cryaquands------	0-9	5-12	0.65-0.85	0.6-2.0	0.15-0.21	0.0-2.9	2.0-4.0	0.37	0.37	3	5	56
	9-15	5-10	0.65-0.85	0.6-2.0	0.12-0.17	0.0-2.9	0.5-1.0	0.37	0.43			
	15-24	0-10	0.65-0.95	0.6-20.0	0.10-0.17	0.0-2.9	0.0-0.5	0.32	---			
	24-60	0-5	0.65-1.85	0.6-20.0	0.05-0.17	0.0-2.9	0.0-0.5	0.24	---			
340:												
Vabbing---------------	0-3	5-10	0.75-0.95	0.6-2.0	0.15-0.19	0.0-2.9	0.5-1.0	0.17	0.24	5	3	86
	3-10	2-10	0.80-1.00	0.6-2.0	0.15-0.19	0.0-2.9	1.0-3.0	0.10	0.24			
	10-26	4-12	0.80-1.00	0.6-20.0	0.12-0.18	0.0-2.9	0.0-2.0	0.05	0.28			
	26-60	6-10	1.35-1.50	0.6-20.0	0.03-0.04	0.0-2.9	0.0-1.0	0.02	0.28			
341:												
Vabbing---------------	0-3	5-10	0.75-0.95	0.6-2.0	0.15-0.19	0.0-2.9	0.5-1.0	0.17	0.24	5	3	86
	3-10	2-10	0.80-1.00	0.6-2.0	0.15-0.19	0.0-2.9	1.0-3.0	0.10	0.24			
	10-26	4-12	0.80-1.00	0.6-20.0	0.12-0.18	0.0-2.9	0.0-2.0	0.05	0.28			
	26-60	6-10	1.35-1.50	0.6-20.0	0.03-0.04	0.0-2.9	0.0-1.0	0.02	0.28			
342:												
Vabbing---------------	0-3	5-10	0.75-0.95	0.6-2.0	0.15-0.19	0.0-2.9	0.5-1.0	0.17	0.24	5	3	86
	3-10	2-10	0.80-1.00	0.6-2.0	0.15-0.19	0.0-2.9	1.0-3.0	0.10	0.24			
	10-26	4-12	0.80-1.00	0.6-20.0	0.12-0.18	0.0-2.9	0.0-2.0	0.05	0.28			
	26-60	6-10	1.35-1.50	0.6-20.0	0.03-0.04	0.0-2.9	0.0-1.0	0.02	0.28			
Gilpar----------------	0-6	5-10	0.60-1.10	0.6-2.0	0.09-0.10	0.0-2.9	3.0-8.0	0.15	0.28	5	5	56
	6-28	5-10	0.70-1.10	0.6-2.0	0.08-0.09	0.0-2.9	0.5-1.0	0.10	0.28			
	28-60	5-10	0.85-1.20	0.6-2.0	0.07-0.08	0.0-2.9	0.0-0.5	0.05	0.32			
343:												
Vabbing---------------	0-3	5-10	0.75-0.95	0.6-2.0	0.15-0.19	0.0-2.9	0.5-1.0	0.17	0.24	5	3	86
	3-10	2-10	0.80-1.00	0.6-2.0	0.15-0.19	0.0-2.9	1.0-3.0	0.10	0.24			
	10-26	4-12	0.80-1.00	0.6-20.0	0.12-0.18	0.0-2.9	0.0-2.0	0.05	0.28			
	26-60	6-10	1.35-1.50	0.6-20.0	0.03-0.04	0.0-2.9	0.0-1.0	0.02	0.28			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
344:												
Vabus-----------------	0-6	6-14	0.60-0.85	2.0-6.0	0.09-0.11	0.0-2.9	2.0-6.0	0.20	0.24	3	4	86
	6-36	5-10	0.70-1.00	2.0-6.0	0.05-0.07	0.0-2.9	0.5-1.0	0.05	0.28			
	36-60	---	1.60-1.80	0.0-0.06	0.02-0.04	---	---	---	---			
345:												
Vabus-----------------	0-6	6-14	0.60-0.85	2.0-6.0	0.09-0.11	0.0-2.9	2.0-6.0	0.20	0.24	3	4	86
	6-36	5-10	0.70-1.00	2.0-6.0	0.05-0.07	0.0-2.9	0.5-1.0	0.05	0.28			
	36-60	---	1.60-1.80	0.0-0.06	0.02-0.04	---	---	---	---			
346:												
Vabus-----------------	0-6	6-14	0.60-0.85	2.0-6.0	0.09-0.11	0.0-2.9	2.0-6.0	0.20	0.24	3	4	86
	6-36	5-10	0.70-1.00	2.0-6.0	0.05-0.07	0.0-2.9	0.5-1.0	0.05	0.28			
	36-60	---	1.60-1.80	0.0-0.06	0.02-0.04	---	---	---	---			
Chinkmin--------------	0-4	6-14	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	6.0-13	0.20	0.28	3	3	86
	4-7	5-15	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	0.5-1.0	0.20	0.28			
	7-18	5-15	0.95-1.10	0.6-2.0	0.11-0.17	0.0-2.9	0.0-0.5	0.17	0.28			
	18-36	2-10	0.95-1.20	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	36-40	---	1.60-1.80	0.00-0.06	0.02-0.04	---	---	---	---			
347:												
Vabus-----------------	0-6	6-14	0.60-0.85	2.0-6.0	0.09-0.11	0.0-2.9	2.0-6.0	0.20	0.24	3	4	86
	6-36	5-10	0.70-1.00	2.0-6.0	0.05-0.07	0.0-2.9	0.5-1.0	0.05	0.28			
	36-60	---	1.60-1.80	0.0-0.06	0.02-0.04	---	---	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
347:												
Chinkmin--------------	0-4	6-14	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	6.0-13	0.20	0.28	3	3	86
	4-7	5-15	0.85-1.10	0.6-2.0	0.14-0.21	0.0-2.9	0.5-1.0	0.20	0.28			
	7-18	5-15	0.95-1.10	0.6-2.0	0.11-0.17	0.0-2.9	0.0-0.5	0.17	0.28			
	18-36	2-10	0.95-1.20	0.6-2.0	0.08-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	36-40	---	1.60-1.80	0.00-0.06	0.02-0.04	---	---	---	---			
348:												
Varelum---------------	0-18	10-15	1.15-1.35	0.6-2.0	0.17-0.20	0.0-2.9	1.0-2.0	0.37	0.37	4	5	56
	18-42	20-35	1.25-1.45	0.6-2.0	0.17-0.20	3.0-5.9	0.0-1.0	0.37	0.37			
	42-52	---	---	---	---	---	0.0-0.5	---	---			
349:												
Varelum---------------	0-18	10-15	1.15-1.35	0.6-2.0	0.17-0.20	0.0-2.9	1.0-2.0	0.37	0.37	4	5	56
	18-42	20-35	1.25-1.45	0.6-2.0	0.17-0.20	3.0-5.9	0.0-1.0	0.37	0.37			
	42-52	---	---	---	---	---	0.0-0.5	---	---			
350:												
Varelum---------------	0-18	10-15	1.15-1.35	0.6-2.0	0.17-0.20	0.0-2.9	1.0-2.0	0.37	0.37	4	5	56
	18-42	20-35	1.25-1.45	0.6-2.0	0.17-0.20	3.0-5.9	0.0-1.0	0.37	0.37			
	42-52	---	---	---	---	---	0.0-0.5	---	---			
351:												
Varelum---------------	0-18	10-15	1.15-1.35	0.6-2.0	0.17-0.20	0.0-2.9	1.0-2.0	0.37	0.37	4	5	56
	18-42	20-35	1.25-1.45	0.6-2.0	0.17-0.20	3.0-5.9	0.0-1.0	0.37	0.37			
	42-52	---	---	---	---	---	0.0-0.5	---	---			
352:												
Vitricryands----------	0-12	5-10	0.65-0.85	0.6-2.0	0.10-0.12	0.0-2.9	0.5-1.0	0.32	0.32	3	3	86
	12-26	4-12	0.65-0.85	0.6-2.0	0.07-0.10	0.0-2.9	0.5-1.0	0.17	0.32			
	26-36	---	---	---	---	---	---	---	---			
353:												
Vitricryands----------	0-12	5-10	0.65-0.85	0.6-2.0	0.10-0.12	0.0-2.9	0.5-1.0	0.32	0.32	3	3	86
	12-26	4-12	0.65-0.85	0.6-2.0	0.07-0.10	0.0-2.9	0.5-1.0	0.17	0.32			
	26-36	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
354:												
Wagberg---------------	0-5	6-14	0.65-0.85	2.0-6.0	0.10-0.13	0.0-2.9	1.0-3.0	0.28	0.28	5	5	56
	5-13	5-10	0.65-0.85	2.0-6.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.28			
	13-38	2-10	1.10-1.30	2.0-6.0	0.09-0.12	0.0-2.9	0.5-1.0	0.15	0.28			
	38-53	2-10	1.25-1.45	2.0-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.15	0.32			
	53-60	0-5	1.30-1.55	2.0-6.0	0.04-0.08	0.0-2.9	0.0-0.5	0.10	0.32			
355:												
Wagberg---------------	0-5	6-14	0.65-0.85	2.0-6.0	0.10-0.13	0.0-2.9	1.0-3.0	0.28	0.28	5	5	56
	5-13	5-10	0.65-0.85	2.0-6.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.28			
	13-38	2-10	1.10-1.30	2.0-6.0	0.09-0.12	0.0-2.9	0.5-1.0	0.15	0.28			
	38-53	2-10	1.25-1.45	2.0-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.15	0.32			
	53-60	0-5	1.30-1.55	2.0-6.0	0.04-0.08	0.0-2.9	0.0-0.5	0.10	0.32			
356:												
Wagberg---------------	0-4	6-14	0.65-0.85	2.0-6.0	0.10-0.13	0.0-2.9	1.0-3.0	0.28	0.28	5	5	56
	4-15	5-10	0.65-0.85	2.0-6.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.28			
	15-40	2-10	1.10-1.30	2.0-6.0	0.09-0.12	0.0-2.9	0.5-1.0	0.15	0.28			
	40-60	2-10	1.25-1.45	2.0-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.15	0.32			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
356:												
Wagberg, south--------	0-5	6-14	0.65-0.85	2.0-6.0	0.10-0.13	0.0-2.9	1.0-3.0	0.28	0.28	5	5	56
	5-13	5-10	0.65-0.85	2.0-6.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.28			
	13-38	2-10	1.10-1.30	2.0-6.0	0.09-0.12	0.0-2.9	0.5-1.0	0.15	0.28			
	38-53	2-10	1.25-1.45	2.0-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.15	0.32			
	53-60	0-5	1.30-1.55	2.0-6.0	0.04-0.08	0.0-2.9	0.0-0.5	0.10	0.32			
357:												
Wagberg---------------	0-5	6-14	0.65-0.85	2.0-6.0	0.10-0.13	0.0-2.9	1.0-3.0	0.28	0.28	5	5	56
	5-13	5-10	0.65-0.85	2.0-6.0	0.09-0.12	0.0-2.9	1.0-2.0	0.20	0.28			
	13-38	2-10	1.10-1.30	2.0-6.0	0.09-0.12	0.0-2.9	0.5-1.0	0.15	0.28			
	38-53	2-10	1.25-1.45	2.0-6.0	0.05-0.10	0.0-2.9	0.0-0.5	0.15	0.32			
	53-60	0-5	1.30-1.55	2.0-6.0	0.04-0.08	0.0-2.9	0.0-0.5	0.10	0.32			
Swakane---------------	0-2	5-10	1.35-1.45	0.6-2.0	0.09-0.10	0.0-2.9	1.0-3.0	0.17	0.28	1	4	86
	2-15	5-15	1.45-1.55	0.6-2.0	0.05-0.10	0.0-2.9	1.0-2.0	0.10	0.32			
	15-19	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
358:												
Wedge-----------------	0-5	5-10	0.65-0.85	2.0-6.0	0.09-0.12	0.0-2.9	0.5-2.0	0.15	0.28	3	4	86
	5-11	5-15	0.65-0.85	2.0-6.0	0.05-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	11-31	2-10	0.65-0.85	2.0-6.0	0.09-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	31-60	0-2	0.65-0.85	20.0-100.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	---			
359:												
Wedge-----------------	0-5	5-10	0.65-0.85	2.0-6.0	0.09-0.12	0.0-2.9	0.5-2.0	0.15	0.28	3	4	86
	5-11	5-15	0.65-0.85	2.0-6.0	0.05-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	11-31	2-10	0.65-0.85	2.0-6.0	0.09-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	31-60	0-2	0.65-0.85	20.0-100.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	---			
360:												
Wedge-----------------	0-5	6-14	0.65-0.85	2.0-6.0	0.11-0.14	0.0-2.9	0.5-2.0	0.20	0.32	2	4	86
	5-17	2-10	0.65-0.85	2.0-6.0	0.09-0.11	0.0-2.9	0.5-1.0	0.10	0.28			
	17-60	0-2	0.65-0.85	20.0-100.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	---			
361:												
Wedge-----------------	0-5	6-14	0.65-0.85	2.0-6.0	0.11-0.14	0.0-2.9	0.5-2.0	0.20	0.32	2	4	86
	5-17	2-10	0.65-0.85	2.0-6.0	0.09-0.11	0.0-2.9	0.5-1.0	0.10	0.28			
	17-60	0-2	0.65-0.85	20.0-100.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	---			
362:												
Wedge-----------------	0-5	6-14	0.65-0.85	2.0-6.0	0.11-0.14	0.0-2.9	0.5-2.0	0.20	0.32	2	4	86
	5-17	2-10	0.65-0.85	2.0-6.0	0.09-0.11	0.0-2.9	0.5-1.0	0.10	0.28			
	17-60	0-2	0.65-0.85	20.0-100.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	---			
Typic Cryaquands------	0-9	5-12	0.65-0.85	0.6-2.0	0.15-0.21	0.0-2.9	2.0-4.0	0.37	0.37	3	5	56
	9-15	5-15	0.65-0.85	0.6-2.0	0.12-0.17	0.0-2.9	0.5-1.0	0.37	0.43			
	15-24	0-10	0.65-0.95	0.6-20.0	0.10-0.17	0.0-2.9	0.0-0.5	0.32	---			
	24-60	0-5	0.65-1.85	0.6-20.0	0.05-0.17	0.0-2.9	0.0-0.5	0.24	---			
363:												
Wedge-----------------	0-5	5-10	0.65-0.85	2.0-6.0	0.09-0.12	0.0-2.9	0.5-2.0	0.15	0.28	3	4	86
	5-11	5-15	0.65-0.85	2.0-6.0	0.05-0.08	0.0-2.9	0.5-1.0	0.10	0.32			
	11-31	2-10	0.65-0.85	2.0-6.0	0.09-0.11	0.0-2.9	0.0-0.5	0.10	0.28			
	31-60	0-2	0.65-0.85	20.0-100.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	---			
Wedge, cold-----------	0-5	6-14	0.65-0.85	2.0-6.0	0.11-0.14	0.0-2.9	0.5-2.0	0.20	0.32	2	4	86
	5-17	2-10	0.65-0.85	2.0-6.0	0.09-0.11	0.0-2.9	0.5-1.0	0.10	0.28			
	17-60	0-2	0.65-0.85	20.0-100.0	0.03-0.06	0.0-2.9	0.0-0.5	0.05	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
364:												
Wedgemont-------------	0-1	6-14	0.70-0.95	6.0-20.0	0.10-0.14	0.0-2.9	1.0-3.0	0.20	0.24	5	5	56
	1-19	6-14	0.70-0.95	6.0-20.0	0.07-0.12	0.0-2.9	1.0-2.0	0.17	0.28			
	19-28	5-15	0.70-0.95	6.0-20.0	0.07-0.12	0.0-2.9	0.5-1.0	0.17	0.28			
	28-60	3-10	1.45-1.65	0.6-2.0	0.04-0.09	0.0-2.9	0.0-0.5	0.10	0.32			
365:												
Wilma-----------------	0-4	6-14	0.70-1.00	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.24	0.24	2	3	86
	4-12	5-15	0.75-1.00	0.6-2.0	0.09-0.11	0.0-2.9	0.5-1.0	0.17	0.24			
	12-24	5-10	1.30-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.10	0.28			
	24-37	2-8	1.35-1.60	2.0-6.0	0.04-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	37-41	---	---	---	---	---	---	---	---			
366:												
Wilma-----------------	0-4	6-14	0.70-1.00	0.6-2.0	0.12-0.14	0.0-2.9	1.0-3.0	0.24	0.24	2	3	86
	4-12	5-15	0.75-1.00	0.6-2.0	0.09-0.11	0.0-2.9	0.5-1.0	0.17	0.24			
	12-24	5-10	1.30-1.50	0.6-2.0	0.06-0.08	0.0-2.9	0.0-0.5	0.10	0.28			
	24-37	2-8	1.35-1.60	2.0-6.0	0.04-0.06	0.0-2.9	0.0-0.5	0.05	0.24			
	37-41	---	---	---	---	---	---	---	---			
Rock outcrop----------	0-60	---	---	---	---	---	---	---	---			
367:												
Yaxing----------------	0-9	15-20	1.40-1.50	0.6-2.0	0.16-0.18	0.0-2.9	1.0-3.0	0.28	0.28	5	5	56
	9-21	15-25	1.45-1.55	0.6-2.0	0.16-0.18	0.0-2.9	0.5-1.0	0.32	0.32			
	21-36	20-30	1.50-1.60	0.6-2.0	0.15-0.17	3.0-5.9	0.0-0.5	0.37	0.37			
	36-60	15-27	1.50-1.60	0.6-2.0	0.15-0.17	3.0-5.9	0.0-0.5	0.37	0.37			
368:												
Yaxing----------------	0-9	15-20	1.40-1.50	0.6-2.0	0.16-0.18	0.0-2.9	1.0-3.0	0.28	0.28	5	5	56
	9-21	15-25	1.45-1.55	0.6-2.0	0.16-0.18	0.0-2.9	0.5-1.0	0.32	0.32			
	21-36	20-30	1.50-1.60	0.6-2.0	0.15-0.17	3.0-5.9	0.0-0.5	0.37	0.37			
	36-60	15-27	1.50-1.60	0.6-2.0	0.15-0.17	3.0-5.9	0.0-0.5	0.37	0.37			
369:												
Yaxon-----------------	0-14	10-18	1.10-1.30	0.6-2.0	0.17-0.20	0.0-2.9	2.0-3.0	0.49	0.49	5	5	56
	14-40	25-35	1.25-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	0.32	0.32			
	40-60	20-30	1.35-1.60	0.2-0.6	0.11-0.15	3.0-5.9	0.0-0.5	0.32	0.32			
370:												
Yaxon-----------------	0-14	10-18	1.10-1.30	0.6-2.0	0.17-0.20	0.0-2.9	2.0-3.0	0.49	0.49	5	5	56
	14-40	25-35	1.25-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	0.32	0.32			
	40-60	20-30	1.35-1.60	0.2-0.6	0.11-0.15	3.0-5.9	0.0-0.5	0.32	0.32			
371:												
Yaxon-----------------	0-14	10-18	1.10-1.30	0.6-2.0	0.17-0.20	0.0-2.9	2.0-3.0	0.49	0.49	5	5	56
	14-40	25-35	1.25-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	0.32	0.32			
	40-60	20-30	1.35-1.60	0.2-0.6	0.11-0.15	3.0-5.9	0.0-0.5	0.32	0.32			
372:												
Yaxon-----------------	0-14	10-18	1.10-1.30	0.6-2.0	0.17-0.20	0.0-2.9	2.0-3.0	0.49	0.49	5	5	56
	14-40	25-35	1.25-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	0.32	0.32			
	40-60	20-30	1.35-1.60	0.2-0.6	0.11-0.15	3.0-5.9	0.0-0.5	0.32	0.32			
373:												
Yaxon-----------------	0-16	10-18	1.10-1.30	0.6-2.0	0.17-0.20	0.0-2.9	2.0-3.0	0.49	0.49	5	5	56
	16-54	25-35	1.25-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	0.32	0.32			
	54-60	20-30	1.35-1.60	0.2-0.6	0.11-0.15	3.0-5.9	0.0-0.5	0.32	0.32			
374:												
Zeb-------------------	0-2	5-12	1.20-1.30	2.0-6.0	0.08-0.11	0.0-2.9	1.0-3.0	0.17	0.28	5	3	86
	2-11	5-12	1.35-1.45	2.0-6.0	0.08-0.12	0.0-2.9	0.5-1.0	0.17	0.28			
	11-28	5-12	1.35-1.50	2.0-6.0	0.06-0.09	0.0-2.9	0.0-0.5	0.10	0.32			
	28-60	5-12	1.35-1.55	2.0-6.0	0.05-0.08	0.0-2.9	0.0-0.5	0.05	0.32			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
W:												
Water	---	---	---	---	---	---	---	---	---			

Table 16.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
1:			
Aeric Fluvaquents	0-8	10-20	6.1-7.3
	8-27	10-20	6.1-7.3
	27-36	0-10	6.1-7.3
	36-60	0-10	6.1-7.3
2:			
Almac	0-3	20-40	5.1-6.0
	3-23	10-30	5.1-6.5
	23-50	5-10	5.1-6.5
	50-63	5-10	5.1-6.5
3:			
Almac	0-3	20-40	5.1-6.0
	3-23	10-30	5.1-6.5
	23-50	5-10	5.1-6.5
	50-63	5-10	5.1-6.5
4:			
Almac	0-3	20-40	5.1-6.0
	3-23	10-30	5.1-6.5
	23-50	5-10	5.1-6.5
	50-63	5-10	5.1-6.5
5:			
Almac	0-8	20-40	5.1-6.0
	8-27	10-30	5.1-6.5
	27-60	5-10	5.1-6.5
Azwell	0-4	20-40	5.1-6.5
	4-15	10-30	5.1-6.5
	15-26	5-10	5.1-6.5
	26-30	---	---
6:			
Almac	0-8	20-40	5.1-6.0
	8-27	10-30	5.1-6.5
	27-60	5-10	5.1-6.5
Azwell	0-4	20-40	5.1-6.5
	4-15	10-30	5.1-6.5
	15-26	5-10	5.1-6.5
	26-30	---	---
Rock outcrop	0-60	---	---
7:			
Almac	0-8	20-40	5.1-6.0
	8-27	10-30	5.1-6.5
	27-60	5-10	5.1-6.5
Rock outcrop	0-60	---	---
8:			
Alnult	0-6	20-40	5.6-6.5
	6-32	20-40	5.6-6.5
	32-60	10-30	5.6-6.5

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
8:			
Reggad	0-9	20-30	4.5-5.0
	9-60	10-15	5.6-6.0
9:			
Altapeak	0-13	20-40	4.5-5.5
	13-29	5-10	5.1-6.5
	29-54	5-10	5.1-6.5
	54-64	---	---
10:			
Altapeak	0-13	20-40	4.5-5.5
	13-29	5-10	5.1-6.5
	29-54	5-10	5.1-6.5
	54-64	---	---
11:			
Altapeak	0-13	20-40	4.5-5.5
	13-29	5-10	5.1-6.5
	29-54	5-10	5.1-6.5
	54-64	---	---
12:			
Altapeak	0-6	20-40	4.5-5.5
	6-26	5-10	5.1-6.5
	26-48	5-10	5.1-6.5
	48-58	---	---
13:			
Altapeak	0-13	20-40	4.5-5.5
	13-29	5-10	5.1-6.5
	29-54	5-10	5.1-6.5
	54-64	---	---
Alnult	0-6	20-40	5.6-6.5
	6-32	20-40	5.6-6.5
	32-60	10-30	5.6-6.5
14:			
Altapeak	0-6	20-40	4.5-5.5
	6-26	5-10	5.1-6.5
	26-48	5-10	5.1-6.5
	48-58	---	---
Alnult	0-6	20-40	5.6-6.5
	6-32	20-40	5.6-6.5
	32-60	10-30	5.6-6.5
15:			
Altapeak	0-6	20-40	4.5-5.5
	6-26	5-10	5.1-6.5
	26-48	5-10	5.1-6.5
	48-58	---	---
Alnult	0-6	20-40	5.6-6.5
	6-32	20-40	5.6-6.5
	32-60	10-30	5.6-6.5
16:			
Anatone	0-4	10-20	6.1-7.3
	4-11	10-25	6.1-7.3
	11-15	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
16:			
Blewett	0-3	10-15	6.1-7.3
	3-10	5-10	6.1-7.3
	10-14	---	---
17:			
Anatone	0-4	10-20	6.1-7.3
	4-11	10-25	6.1-7.3
	11-15	---	---
Rock outcrop	0-60	---	---
18:			
Andic Cryochrepts	0-4	20-40	5.6-6.5
	4-10	10-30	5.6-6.5
	10-60	2-10	5.6-6.5
19:			
Andic Cryumbrepts	0-8	20-40	5.6-6.5
	8-24	10-30	5.6-6.5
	24-60	0-10	6.1-7.3
20:			
Andic Cryumbrepts	0-9	20-40	5.6-6.5
	9-14	10-30	5.6-6.5
	14-24	0-10	5.6-7.3
	24-34	---	---
21:			
Andic Cryumbrepts	0-9	20-40	5.6-6.5
	9-14	10-30	5.6-6.5
	14-24	0-10	5.6-7.3
	24-34	---	---
Haplocryods	0-3	10-30	6.1-7.3
	3-32	10-15	6.1-7.3
	32-60	10-15	6.1-7.3
Rock outcrop	0-60	---	---
22:			
Andic Cryumbrepts	0-9	20-40	5.6-6.5
	9-14	10-30	5.6-6.5
	14-24	0-10	5.6-7.3
	24-34	---	---
Rock outcrop	0-60	---	---
23:			
Andic Cryumbrepts	0-10	20-40	5.6-6.5
	10-16	10-30	5.6-6.5
	16-33	10-20	5.6-6.5
	33-51	10-20	5.6-6.5
	51-55	---	---
Rock outcrop	0-60	---	---
24:			
Andic Haplumbrepts	0-8	10-15	5.6-6.5
	8-29	5-10	5.6-6.5
	29-33	---	---
Rock outcrop	0-60	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
25:			
Angle	0-2	0-10	5.6-6.5
	2-7	0-10	5.6-6.5
	7-42	0-10	5.6-6.5
	42-60	0-10	5.6-6.5
26:			
Aquic Cryumbrepts	0-4	4-9	5.1-6.5
	4-8	2-7	5.1-6.5
	8-29	1-4	6.1-7.3
	29-60	0-2	6.1-7.3
27:			
Ardening	0-6	10-15	6.1-7.3
	6-18	5-10	6.1-7.3
	18-26	5-10	6.1-7.3
	26-42	5-10	6.1-7.3
	42-52	---	---
28:			
Ardenmont	0-4	10-20	6.1-7.3
	4-23	5-15	6.1-7.3
	23-51	5-15	6.1-7.8
	51-61	---	---
29:			
Ardenmont	0-4	10-20	6.1-7.3
	4-23	5-15	6.1-7.3
	23-51	5-15	6.1-7.8
	51-61	---	---
30:			
Ardenmont	0-4	10-20	6.1-7.3
	4-23	5-15	6.1-7.3
	23-51	5-15	6.1-7.8
	51-61	---	---
31:			
Ardenmont	0-4	10-20	6.1-7.3
	4-23	5-15	6.1-7.3
	23-51	5-15	6.1-7.8
	51-61	---	---
Swakane	0-2	3-6	6.6-7.3
	2-15	3-6	6.1-7.3
	15-19	---	---
32:			
Ardenvoir	0-6	10-20	6.1-7.3
	6-12	5-15	5.6-7.3
	12-56	5-15	5.6-7.3
	56-60	---	---
33:			
Ardenvoir	0-6	10-20	6.1-7.3
	6-12	5-15	5.6-7.3
	12-56	5-15	5.6-7.3
	56-60	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
34:			
Azwell	0-4	20-40	5.1-6.5
	4-15	10-30	5.1-6.5
	15-26	5-10	5.1-6.5
	26-30	---	---
Rock outcrop	0-60	---	---
35:			
Bagmont	0-4	20-40	6.6-7.3
	4-12	20-40	6.6-7.3
	12-38	10-30	6.6-7.3
	38-48	---	---
36:			
Bigcreek	0-5	20-40	6.1-7.3
	5-16	10-30	6.1-7.3
	16-30	10-30	6.1-7.3
	30-33	10-30	6.1-7.3
	33-38	10-30	6.1-7.3
	38-60	5-10	6.1-7.3
37:			
Billyridge	0-16	10-15	6.6-7.3
	16-40	5-10	6.6-7.3
	40-60	5-10	6.6-7.3
38:			
Billyridge	0-16	10-15	6.6-7.3
	16-40	5-10	6.6-7.3
	40-60	5-10	6.6-7.3
39:			
Billyridge	0-16	10-15	6.6-7.3
	16-40	5-10	6.6-7.3
	40-60	5-10	6.6-7.3
40:			
Bisping	0-4	20-40	6.1-7.3
	4-30	10-30	6.1-7.3
	30-60	5-10	6.6-7.8
41:			
Bisping	0-4	20-40	6.1-7.3
	4-30	10-30	6.1-7.3
	30-60	5-10	6.6-7.8
42:			
Bisping	0-4	20-40	6.1-7.3
	4-30	10-30	6.1-7.3
	30-60	5-10	6.6-7.8
43:			
Bjork	0-10	10-20	6.6-7.8
	10-24	5-15	6.6-7.8
	24-34	---	---
44:			
Bjork	0-6	10-20	6.6-7.8
	6-30	5-15	6.6-7.8
	30-40	---	---
Rock outcrop	0-60	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
45:			
Blag-----------------	0-6	10-15	6.6-7.3
	6-16	5-10	6.6-7.3
	16-20	---	---
Cle Elum-------------	0-14	10-15	5.6-7.3
	14-26	15-20	5.6-7.3
	26-32	---	---
Rock outcrop---------	0-60	---	---
46:			
Blag-----------------	0-6	10-15	6.6-7.3
	6-16	5-10	6.6-7.3
	16-20	---	---
Rock outcrop---------	0-60	---	---
47:			
Blewett--------------	0-3	10-15	6.1-7.3
	3-10	5-10	6.1-7.3
	10-14	---	---
Rock outcrop---------	0-60	---	---
48:			
Borland--------------	0-6	10-20	6.6-7.8
	6-11	10-20	6.6-7.8
	11-15	---	---
49:			
Borland--------------	0-6	10-20	6.6-7.8
	6-11	10-20	6.6-7.8
	11-15	---	---
Rock outcrop---------	0-60	---	---
50:			
Brief----------------	0-16	5-10	6.6-7.8
	16-26	5-10	6.6-7.8
	26-60	5-10	6.6-8.4
51:			
Brisky---------------	0-4	5-15	6.1-7.3
	4-10	5-10	6.1-7.3
	10-14	---	---
Rock outcrop---------	0-60	---	---
52:			
Burch----------------	0-10	10-15	6.6-7.3
	10-60	10-15	6.6-7.8
53:			
Burnscreek-----------	0-3	4-8	6.1-7.3
	3-13	2-5	6.1-7.3
	13-60	1-3	6.1-7.3
54:			
Burrant--------------	0-16	10-20	6.6-7.3
	16-42	10-20	6.6-7.8
	42-60	10-20	6.6-7.8

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
55:			
Burrant--------------	0-16	10-20	6.6-7.3
	16-42	10-20	6.6-7.8
	42-60	10-20	6.6-7.8
56:			
Cashmont-------------	0-12	2-6	6.1-7.8
	12-30	2-4	6.6-7.8
	30-40	2-4	6.6-7.8
	40-60	0-2	6.6-7.8
57:			
Cashmont-------------	0-10	2-6	6.1-7.8
	10-28	2-4	6.6-7.8
	28-60	2-4	6.6-7.8
58:			
Chapot---------------	0-8	10-20	6.1-7.3
	8-16	10-20	6.1-7.3
	16-60	15-25	6.1-7.3
59:			
Chinkmin-------------	0-4	20-40	4.5-5.5
	4-7	20-40	5.1-6.5
	7-18	10-30	5.1-6.5
	18-36	10-30	5.6-6.5
	36-40	0-10	5.6-6.0
60:			
Chinkmin-------------	0-4	20-40	4.5-5.5
	4-7	20-40	5.1-6.5
	7-18	10-30	5.1-6.5
	18-36	10-30	5.6-6.5
	36-40	0-10	5.6-6.0
61:			
Chinkmin-------------	0-4	20-40	4.5-5.5
	4-7	20-40	5.1-6.5
	7-18	10-30	5.1-6.5
	18-36	10-30	5.6-6.5
	36-40	0-10	5.6-6.0
Altapeak-------------	0-6	20-40	4.5-5.5
	6-26	5-10	5.1-6.5
	26-48	5-10	5.1-6.5
	48-58	---	---
62:			
Chinkmin-------------	0-4	20-40	4.5-5.5
	4-7	20-40	5.1-6.5
	7-18	10-30	5.1-6.5
	18-36	10-30	5.6-6.5
	36-40	0-10	5.6-6.0
Altapeak-------------	0-6	20-40	4.5-5.5
	6-26	5-10	5.1-6.5
	26-48	5-10	5.1-6.5
	48-58	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
63:			
Chiwaukum	0-2	20-40	5.1-6.0
	2-11	10-30	5.1-6.5
	11-39	10-15	5.6-6.5
	39-60	10-15	5.6-6.5
64:			
Chiwaukum	0-5	20-40	5.1-6.0
	5-17	10-30	5.1-6.5
	17-26	10-15	5.6-6.5
	26-60	10-15	5.6-6.5
65:			
Chiwaukum	0-10	20-40	5.1-6.0
	10-38	10-30	5.6-6.5
	38-60	10-15	5.6-6.5
66:			
Chiwaukum	0-2	20-40	5.1-6.0
	2-15	10-30	5.1-6.5
	15-24	10-15	5.6-6.5
	24-60	10-15	5.6-6.5
67:			
Chiwaukum	0-2	20-40	5.1-6.0
	2-11	10-30	5.1-6.5
	11-39	10-15	5.6-6.5
	39-60	10-15	5.6-6.5
Chiwaukum, south	0-10	20-40	5.1-6.0
	10-38	10-30	5.6-6.5
	38-60	10-15	5.6-6.5
68:			
Chiwaukum	0-2	20-40	5.1-6.0
	2-11	10-30	5.1-6.5
	11-39	10-15	5.6-6.5
	39-60	10-15	5.6-6.5
Chiwaukum, south	0-10	20-40	5.1-6.0
	10-38	10-30	5.6-6.5
	38-60	10-15	5.6-6.5
69:			
Chiwawa	0-2	20-40	5.6-7.3
	2-42	10-30	6.1-7.3
	42-60	10-15	6.1-7.3
70:			
Choralmont, till substratum	0-9	20-40	5.6-7.3
	9-17	10-30	5.6-7.3
	17-33	10-30	5.6-7.3
	33-48	10-30	5.6-7.3
	48-54	10-30	5.6-7.3
	54-60	10-15	5.6-7.3
Choralmont	0-11	20-40	5.6-7.3
	11-17	10-30	5.6-7.3
	17-60	10-30	5.6-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
71:			
Choralmont	0-11	20-40	5.6-7.3
	11-17	10-30	5.6-7.3
	17-60	10-30	5.6-7.3
72:			
Choralmont	0-11	20-40	5.6-7.3
	11-17	10-30	5.6-7.3
	17-60	10-30	5.6-7.3
73:			
Choralmont	0-9	20-40	5.6-7.3
	9-17	10-30	5.6-7.3
	17-33	10-30	5.6-7.3
	33-48	10-30	5.6-7.3
	48-54	10-30	5.6-7.3
	54-60	10-15	5.6-7.3
74:			
Choralmont	0-9	20-40	5.6-7.3
	9-17	10-30	5.6-7.3
	17-33	10-30	5.6-7.3
	33-48	10-30	5.6-7.3
	48-54	10-30	5.6-7.3
	54-60	10-15	5.6-7.3
75:			
Choralmont	0-11	20-40	5.6-7.3
	11-17	10-30	5.6-7.3
	17-60	10-30	5.6-7.3
Limking	0-4	20-40	6.1-7.3
	4-15	10-30	6.1-7.3
	15-38	5-15	6.1-7.3
	38-55	5-15	6.1-7.3
	55-59	---	---
76:			
Chumstick	0-4	10-20	6.1-7.3
	4-14	10-20	6.1-7.3
	14-19	10-20	6.1-7.3
	19-23	---	---
77:			
Chumstick	0-4	10-20	6.1-7.3
	4-14	10-20	6.1-7.3
	14-19	10-20	6.1-7.3
	19-23	---	---
78:			
Chumstick	0-4	10-20	6.1-7.3
	4-14	10-20	6.1-7.3
	14-19	10-20	6.1-7.3
	19-23	---	---
79:			
Cle Elum	0-14	10-15	5.6-7.3
	14-36	15-20	5.6-7.3
	36-46	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
80:			
Cle Elum	0-14	10-15	5.6-7.3
	14-36	15-20	5.6-7.3
	36-46	---	---
81:			
Coopmont	0-5	20-40	6.1-7.3
	5-12	20-40	6.1-7.3
	12-28	10-30	6.1-7.3
	28-50	0-10	6.1-7.3
	50-60	0-10	6.1-7.3
82:			
Coopmont	0-5	20-40	6.1-7.3
	5-12	20-40	6.1-7.3
	12-28	10-30	6.1-7.3
	28-50	0-10	6.1-7.3
	50-60	0-10	6.1-7.3
83:			
Cowiche	0-10	5-15	6.6-7.8
	10-20	5-15	6.6-7.8
	20-50	15-25	6.6-8.4
	50-60	---	---
Cowiche, very deep	0-10	10-20	6.6-7.8
	10-25	10-20	6.6-7.8
	25-45	15-25	6.6-7.8
	45-60	5-15	7.4-8.4
84:			
Cowiche	0-10	5-15	6.6-7.8
	10-20	5-15	6.6-7.8
	20-50	15-25	6.6-8.4
	50-60	---	---
Cowiche, very deep	0-10	10-20	6.6-7.8
	10-25	10-20	6.6-7.8
	25-45	15-25	6.6-7.8
	45-60	5-15	7.4-8.4
85:			
Cryomont	0-5	5-15	5.6-7.3
	5-12	5-15	5.6-7.3
	12-60	5-15	5.6-7.3
86:			
Cryomont	0-4	5-15	5.6-7.3
	4-12	5-15	5.6-7.3
	12-60	5-15	5.6-7.3
87:			
Cryomont	0-5	5-15	5.6-7.3
	5-12	5-15	5.6-7.3
	12-60	5-15	5.6-7.3
Cryomont, fan	0-4	5-15	5.6-7.3
	4-12	5-15	5.6-7.3
	12-60	5-15	5.6-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
88:			
Culving	0-4	10-20	6.1-7.3
	4-8	10-20	6.1-7.3
	8-21	10-20	6.1-7.3
	21-25	---	---
Rock outcrop	0-60	---	---
89:			
Culvop	0-10	20-40	5.6-6.5
	10-16	10-30	5.6-6.5
	16-20	---	---
90:			
Devore	0-2	20-40	5.1-6.0
	2-25	5-15	5.6-7.3
	25-29	---	---
Rock outcrop	0-60	---	---
91:			
Dinkelman	0-15	2-8	6.1-7.8
	15-42	4-6	6.1-7.8
	42-52	---	---
92:			
Dinkelman	0-15	2-8	6.1-7.8
	15-42	4-6	6.1-7.8
	42-52	---	---
93:			
Dinkelman	0-15	2-8	6.1-7.8
	15-42	4-6	6.1-7.8
	42-52	---	---
Rock outcrop	0-60	---	---
94:			
Dinkels	0-10	5-15	6.6-7.8
	10-56	5-10	6.6-7.8
	56-60	---	---
95:			
Dinkels	0-10	5-15	6.6-7.8
	10-56	5-10	6.6-7.8
	56-60	---	---
96:			
Dinkels	0-11	5-15	6.6-7.8
	11-22	5-10	6.6-7.8
	22-59	2-10	6.6-7.8
	59-63	---	---
97:			
Domkey	0-3	20-40	6.6-7.3
	3-10	20-40	6.6-7.3
	10-18	10-30	6.6-7.3
	18-35	10-30	6.6-7.3
	35-45	10-30	6.6-7.3
	45-55	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
98:			
Domkey	0-3	20-40	6.6-7.3
	3-10	20-40	6.6-7.3
	10-18	10-30	6.6-7.3
	18-35	10-30	6.6-7.3
	35-45	10-30	6.6-7.3
	45-55	---	---
99:			
Domkey	0-3	20-40	6.6-7.3
	3-10	20-40	6.6-7.3
	10-18	10-30	6.6-7.3
	18-35	10-30	6.6-7.3
	35-45	10-30	6.6-7.3
	45-55	---	---
McCree	0-5	20-40	6.1-7.3
	5-19	5-15	6.1-7.3
	19-56	5-15	6.6-7.3
	56-60	---	---
100:			
Dragoon	0-8	10-15	6.1-7.3
	8-24	10-15	6.1-7.3
	24-34	---	---
101:			
Dragoon	0-10	10-15	6.1-7.3
	10-27	10-15	6.1-7.3
	27-37	---	---
102:			
Entiat	0-4	5-10	6.6-7.8
	4-10	10-15	6.6-7.8
	10-15	8-15	6.6-7.8
	15-25	---	---
103:			
Entiat	0-4	5-10	6.6-7.8
	4-10	10-15	6.6-7.8
	10-15	8-15	6.6-7.8
	15-25	---	---
Rock outcrop	0-60	---	---
104:			
Entic Haplumbrepts	0-3	22-44	5.1-6.0
	3-19	0-0	5.1-6.0
	19-60	0-0	5.1-6.0
105:			
Esmeralda	0-4	20-40	5.1-6.0
	4-12	20-40	5.1-6.0
	12-35	10-30	5.1-6.0
	35-60	5-10	5.1-6.0
106:			
Esmeralda	0-4	20-40	5.1-6.0
	4-12	20-40	5.1-6.0
	12-35	10-30	5.1-6.0
	35-60	5-10	5.1-6.0
Rock outcrop	0-60	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
107:			
Fears----------------	0-2	20-40	5.6-6.5
	2-10	20-40	5.6-6.5
	10-20	10-30	6.1-7.3
	20-32	10-30	5.6-7.3
	32-60	10-30	5.6-7.3
108:			
Fears----------------	0-2	20-40	5.6-6.5
	2-10	20-40	5.6-6.5
	10-20	10-30	6.1-7.3
	20-32	10-30	5.6-7.3
	32-60	10-30	5.6-7.3
Devore---------------	0-2	20-40	5.1-6.0
	2-25	5-15	5.6-7.3
	25-29	---	---
109:			
Fernow---------------	0-5	20-40	4.5-6.0
	5-27	10-30	5.6-6.5
	27-46	10-30	5.6-6.5
	46-60	10-30	5.6-6.5
110:			
Fernow---------------	0-5	20-40	4.5-6.0
	5-27	10-30	5.6-6.5
	27-46	10-30	5.6-6.5
	46-60	10-30	5.6-6.5
111:			
Fernow---------------	0-5	20-40	4.5-6.0
	5-27	10-30	5.6-6.5
	27-46	10-30	5.6-6.5
	46-60	10-30	5.6-6.5
Serene---------------	0-4	20-40	5.1-6.0
	4-8	10-30	5.1-6.0
	8-13	10-30	5.1-6.0
	13-24	10-15	5.1-6.5
	24-34	---	---
112:			
Fluvaquents----------	0-16	10-20	6.1-7.3
	16-23	10-20	6.1-7.3
	23-29	10-15	6.1-7.3
	29-60	10-15	6.1-7.3
113:			
Georgecreek----------	0-10	5-8	6.1-7.8
	10-42	6-10	6.1-7.8
	42-52	---	---
114:			
Georgecreek----------	0-10	5-8	6.1-7.8
	10-42	6-10	6.1-7.8
	42-52	---	---
115:			
Georgecreek----------	0-10	5-8	6.1-7.8
	10-42	6-10	6.1-7.8
	42-52	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
116:			
Georgecreek----------	0-10	5-8	6.1-7.8
	10-42	6-10	6.1-7.8
	42-52	---	---
Dragoon--------------	0-8	10-15	6.1-7.3
	8-24	10-15	6.1-7.3
	24-34	---	---
117:			
Georgecreek----------	0-6	5-8	6.1-7.8
	6-19	4-9	6.1-7.3
	19-53	6-10	6.1-7.8
	53-63	---	---
Dragoon--------------	0-8	10-15	6.1-7.3
	8-24	10-15	6.1-7.3
	24-34	---	---
118:			
Gilpar---------------	0-6	20-40	5.1-6.0
	6-28	10-30	5.1-6.5
	28-60	10-30	5.6-6.5
119:			
Gilpar---------------	0-6	20-40	5.1-6.0
	6-28	10-30	5.1-6.5
	28-60	10-30	5.6-6.5
Nimue----------------	0-7	20-40	4.5-5.5
	7-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
120:			
Gilpar---------------	0-6	20-40	5.1-6.0
	6-28	10-30	5.1-6.5
	28-60	10-30	5.6-6.5
Nimue----------------	0-2	20-40	4.5-5.5
	2-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
Rock outcrop---------	0-60	---	---
121:			
Gilpar---------------	0-6	20-40	5.1-6.0
	6-28	10-30	5.1-6.5
	28-60	10-30	5.6-6.5
Rock outcrop---------	0-60	---	---
122:			
Glaciers, snowfields	0-60	---	---
123:			
Goffpeak-------------	0-13	20-40	6.1-7.3
	13-26	10-30	6.1-7.3
	26-42	10-30	6.1-7.3
	42-46	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
124:			
Goffpeak	0-13	20-40	6.1-7.3
	13-26	10-30	6.1-7.3
	26-42	10-30	6.1-7.3
	42-46	---	---
Fears	0-2	20-40	5.6-6.5
	2-10	20-40	5.6-6.5
	10-20	10-30	6.1-7.3
	20-32	10-30	5.6-7.3
	32-60	10-30	5.6-7.3
125:			
Haplocryods, cold	0-4	10-30	5.6-6.5
	4-10	10-15	5.6-6.5
	10-15	10-15	5.6-6.5
	15-25	10-15	5.6-6.5
	25-29	---	---
Haplocryods, stony	0-3	10-15	6.1-7.3
	3-32	10-15	6.1-7.3
	32-60	10-15	6.1-7.3
126:			
Haplocryods	0-6	10-30	5.1-6.0
	6-15	5-10	5.6-6.5
	15-29	5-10	5.6-6.5
	29-52	5-10	5.6-6.5
	52-56	---	---
Andic Cryochrepts	0-4	20-40	5.6-6.5
	4-10	10-30	5.6-6.5
	10-60	2-10	5.6-6.5
Rock outcrop	0-60	---	---
127:			
Haploxerolls	0-10	10-20	6.6-7.8
	10-26	10-20	6.6-7.8
	26-60	10-20	6.6-7.8
128:			
Haploxerolls	0-10	10-20	6.6-7.8
	10-26	10-20	6.6-7.8
	26-60	10-20	6.6-7.8
129:			
Humicryods	0-2	5-10	4.5-5.0
	2-10	5-10	4.5-5.5
	10-20	5-10	5.1-6.0
	20-39	5-10	5.1-6.0
	39-49	---	---
Andic Cryumbrepts	0-4	20-40	5.6-6.5
	4-10	10-30	5.6-6.5
	10-60	0-10	6.1-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
130:			
Humicryods-----------	0-2	5-10	4.5-5.0
	2-10	5-10	4.5-5.5
	10-20	5-10	5.1-6.0
	20-39	5-10	5.1-6.0
	39-49	---	---
Andic Cryochrepts----	0-4	20-40	5.6-6.5
	4-10	10-30	5.6-6.5
	10-60	2-10	5.6-6.5
Rock outcrop---------	0-60	---	---
131:			
Humicryods-----------	0-2	5-10	4.5-5.0
	2-10	5-10	4.5-5.5
	10-20	5-10	5.1-6.0
	20-39	5-10	5.1-6.0
	39-49	---	---
Andic Cryumbrepts----	0-10	20-40	5.6-6.5
	10-16	10-30	5.6-6.5
	16-33	10-20	5.6-6.5
	33-51	10-20	5.6-6.5
	51-55	---	---
Rock outcrop---------	0-60	---	---
132:			
Hyprairie------------	0-22	10-20	6.6-7.3
	22-60	10-20	6.6-7.3
133:			
Hyprairie------------	0-22	10-20	6.6-7.3
	22-60	10-20	6.6-7.3
134:			
Hyprairie------------	0-22	10-20	6.6-7.3
	22-60	10-20	6.6-7.3
Oldbutte-------------	0-17	10-15	6.6-7.8
	17-36	15-20	6.6-7.8
	36-60	15-20	6.6-7.8
135:			
Icicle, south--------	0-5	10-20	6.1-7.3
	5-24	10-20	6.1-7.3
	24-60	10-20	6.1-7.3
Icicle---------------	0-5	10-20	6.1-7.3
	5-20	10-20	6.1-7.3
	20-60	10-20	6.1-7.3
136:			
Icicle---------------	0-5	10-20	6.1-7.3
	5-24	10-20	6.1-7.3
	24-60	10-20	6.1-7.3
137:			
Icicle---------------	0-5	10-20	6.1-7.3
	5-20	10-20	6.1-7.3
	20-60	10-20	6.1-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
138:			
Icicle---------------	0-5	10-20	6.1-7.3
	5-20	10-20	6.1-7.3
	20-60	10-20	6.1-7.3
139:			
Icicle---------------	0-5	10-20	6.1-7.3
	5-30	10-20	6.1-7.3
	30-60	10-20	6.1-7.3
140:			
Icicle---------------	0-8	10-15	6.1-7.3
	8-28	10-15	6.1-7.3
	28-50	10-15	6.1-7.3
	50-54	---	---
Chumstick------------	0-4	10-20	6.1-7.3
	4-14	10-20	6.1-7.3
	14-19	10-20	6.1-7.3
	19-23	---	---
Rock outcrop---------	0-60	---	---
141:			
Icicle---------------	0-8	10-15	6.1-7.3
	8-28	10-15	6.1-7.3
	28-50	10-15	6.1-7.3
	50-54	---	---
Chumstick------------	0-4	10-20	6.1-7.3
	4-14	10-20	6.1-7.3
	14-19	10-20	6.1-7.3
	19-23	---	---
Rock outcrop---------	0-60	---	---
142:			
Inkler---------------	0-4	20-40	6.1-7.3
	4-10	5-15	6.1-7.3
	10-29	5-15	6.1-7.3
	29-44	5-15	6.1-7.3
	44-48	---	---
143:			
Isella---------------	0-6	20-40	5.1-6.0
	6-20	10-30	5.1-6.0
	20-50	10-30	5.6-6.5
	50-60	10-30	5.6-6.5
Fernow---------------	0-5	20-40	4.5-6.0
	5-27	10-30	5.6-6.5
	27-46	10-30	5.6-6.5
	46-60	10-30	5.6-6.5
144:			
Isella---------------	0-6	20-40	5.1-6.0
	6-20	10-30	5.1-6.0
	20-50	10-30	5.6-6.5
	50-60	10-30	5.6-6.5

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
144:			
Fernow	0-5	20-40	4.5-6.0
	5-27	10-30	5.6-6.5
	27-46	10-30	5.6-6.5
	46-60	10-30	5.6-6.5
145:			
Isella	0-2	20-40	5.1-6.0
	2-24	10-30	5.1-6.0
	24-60	10-30	5.6-6.5
Nimue	0-7	20-40	4.5-5.5
	7-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
146:			
Isella	0-2	20-40	5.1-6.0
	2-24	10-30	5.1-6.0
	24-60	10-30	5.6-6.5
Nimue	0-2	20-40	4.5-5.5
	2-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
147:			
Kingmont	0-14	10-20	6.1-7.3
	14-28	10-20	6.1-7.3
	28-60	15-25	6.1-7.3
148:			
Kladnick	0-14	20-40	5.6-7.3
	14-21	10-15	5.6-7.3
	21-60	10-15	5.6-7.3
149:			
Kladnick	0-8	20-40	5.6-7.3
	8-19	10-15	5.6-7.3
	19-60	10-15	5.6-7.3
150:			
Kladnick	0-6	20-40	5.6-7.3
	6-11	10-15	5.6-7.3
	11-60	10-15	5.6-7.3
151:			
Klapatche	0-4	20-40	4.5-6.0
	4-12	10-30	5.1-6.0
	12-26	10-15	5.1-6.0
	26-37	1-5	5.1-6.0
	37-47	---	---
Altapeak	0-13	20-40	4.5-5.5
	13-29	5-10	5.1-6.5
	29-54	5-10	5.1-6.5
	54-64	---	---
152:			
Kloochman	0-3	20-40	5.6-7.3
	3-18	10-30	6.1-7.3
	18-34	5-10	6.1-7.3
	34-38	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
153:			
Kloochman------------	0-3	20-40	5.6-7.3
	3-18	10-30	6.1-7.3
	18-34	5-10	6.1-7.3
	34-38	---	---
154:			
Kloochman------------	0-3	20-40	5.6-7.3
	3-18	10-30	6.1-7.3
	18-34	5-10	6.1-7.3
	34-38	---	---
155:			
Kloochman------------	0-3	20-40	5.6-7.3
	3-20	10-30	6.1-7.3
	20-36	5-10	6.1-7.3
	36-40	---	---
Inkler---------------	0-4	20-40	6.1-7.3
	4-10	5-15	6.1-7.3
	10-29	5-15	6.1-7.3
	29-44	5-15	6.1-7.3
	44-48	---	---
156:			
Kloochman------------	0-3	20-40	5.6-7.3
	3-20	10-30	6.1-7.3
	20-36	5-10	6.1-7.3
	36-40	---	---
Inkler---------------	0-4	20-40	6.1-7.3
	4-10	5-15	6.1-7.3
	10-29	5-15	6.1-7.3
	29-44	5-15	6.1-7.3
	44-48	---	---
Rock outcrop---------	0-60	---	---
157:			
Kloochman------------	0-3	20-40	5.6-7.3
	3-18	10-30	6.1-7.3
	18-34	5-10	6.1-7.3
	34-38	---	---
Rock outcrop---------	0-60	---	---
158:			
Limking--------------	0-6	20-40	6.1-7.3
	6-13	10-30	6.1-7.3
	13-22	10-30	6.1-7.3
	22-44	5-15	6.1-7.3
	44-58	5-15	6.1-7.3
	58-62	---	---
159:			
Limking--------------	0-6	20-40	6.1-7.3
	6-13	10-30	6.1-7.3
	13-22	10-30	6.1-7.3
	22-44	5-15	6.1-7.3
	44-58	5-15	6.1-7.3
	58-62	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
159:			
Coopmont	0-5	20-40	6.1-7.3
	5-12	20-40	6.1-7.3
	12-28	10-30	6.1-7.3
	28-50	0-10	6.1-7.3
	50-60	0-10	6.1-7.3
160:			
Limking	0-6	20-40	6.1-7.3
	6-13	10-30	6.1-7.3
	13-22	10-30	6.1-7.3
	22-44	5-15	6.1-7.3
	44-58	5-15	6.1-7.3
	58-62	---	---
Coopmont	0-5	20-40	6.1-7.3
	5-12	20-40	6.1-7.3
	12-28	10-30	6.1-7.3
	28-50	0-10	6.1-7.3
	50-60	0-10	6.1-7.3
161:			
Limking	0-6	20-40	6.1-7.3
	6-13	10-30	6.1-7.3
	13-22	10-30	6.1-7.3
	22-44	5-15	6.1-7.3
	44-58	5-15	6.1-7.3
	58-62	---	---
Coopmont	0-5	20-40	6.1-7.3
	5-12	20-40	6.1-7.3
	12-28	10-30	6.1-7.3
	28-50	0-10	6.1-7.3
	50-60	0-10	6.1-7.3
Rock outcrop	0-60	---	---
162:			
Limking	0-6	20-40	6.1-7.3
	6-13	10-30	6.1-7.3
	13-22	10-30	6.1-7.3
	22-44	5-15	6.1-7.3
	44-58	5-15	6.1-7.3
	58-62	---	---
Rock outcrop	0-60	---	---
163:			
Line	0-4	20-40	3.5-6.5
	4-15	10-30	6.1-7.3
	15-60	5-15	6.1-7.3
164:			
Line	0-10	20-40	3.5-6.5
	10-21	10-30	6.1-7.3
	21-60	5-15	6.1-7.3
165:			
Line	0-8	20-40	3.5-6.5
	8-22	10-30	6.6-7.3
	22-60	5-10	6.6-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
166:			
Line	0-10	20-40	3.5-6.5
	10-21	10-30	6.1-7.3
	21-60	5-15	6.1-7.3
Vabbing	0-3	20-40	5.6-6.5
	3-10	10-30	6.1-6.5
	10-26	10-30	6.1-7.3
	26-60	5-15	6.1-7.3
167:			
Loneridge	0-9	10-15	5.6-7.3
	9-36	15-20	5.6-7.3
	36-60	15-20	5.6-7.3
168:			
Loneridge	0-4	10-15	5.6-7.3
	4-30	10-15	5.6-7.3
	30-60	15-20	5.6-7.3
169:			
Loneridge	0-8	10-15	5.6-7.3
	8-60	15-20	5.6-7.3
170:			
Macreeing	0-5	10-15	6.6-7.8
	5-23	10-15	6.6-7.8
	23-48	10-15	6.6-7.8
	48-52	---	---
171:			
Macreeing	0-5	10-15	6.6-7.8
	5-23	10-15	6.6-7.8
	23-48	10-15	6.6-7.8
	48-52	---	---
172:			
Macreeing	0-5	10-15	6.6-7.8
	5-23	10-15	6.6-7.8
	23-48	10-15	6.6-7.8
	48-52	---	---
Rock outcrop	0-60	---	---
173:			
Mansonia	0-19	20-40	6.6-7.8
	19-41	10-30	6.6-7.8
	41-60	0-5	6.6-7.8
174:			
Mansonia	0-10	20-40	6.6-7.8
	10-20	10-30	6.6-7.8
	20-50	10-30	6.6-7.8
	50-54	---	---
Swakane	0-2	3-6	6.6-7.3
	2-15	3-6	6.1-7.3
	15-19	---	---
Rock outcrop	0-60	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
175:			
Mansonia	0-10	20-40	6.6-7.8
	10-20	10-30	6.6-7.8
	20-50	10-30	6.6-7.8
	50-54	---	---
Swakane	0-6	3-6	6.6-7.3
	6-11	3-6	6.1-7.3
	11-14	3-6	6.6-7.8
	14-18	---	---
Rock outcrop	0-60	---	---
176:			
Marmont	0-10	20-40	6.6-7.8
	10-22	10-30	6.6-7.8
	22-60	0-10	6.6-7.8
177:			
Marmont	0-10	20-40	6.6-7.8
	10-22	10-30	6.6-7.8
	22-60	0-10	6.6-7.8
178:			
Marmont	0-10	20-40	6.6-7.8
	10-22	10-30	6.6-7.8
	22-60	0-10	6.6-7.8
179:			
McCree	0-5	20-40	6.1-7.3
	5-19	5-15	6.1-7.3
	19-56	5-15	6.6-7.3
	56-60	---	---
180:			
McCree	0-5	20-40	6.1-7.3
	5-19	5-15	6.1-7.3
	19-56	5-15	6.6-7.3
	56-60	---	---
181:			
McCree	0-5	20-40	6.1-7.3
	5-19	5-15	6.1-7.3
	19-56	5-15	6.6-7.3
	56-60	---	---
182:			
McCree	0-5	20-40	6.1-7.3
	5-19	5-15	6.1-7.3
	19-56	5-15	6.6-7.3
	56-60	---	---
Palmich	0-4	20-40	6.1-7.3
	4-15	20-40	6.1-7.3
	15-26	10-30	6.1-7.3
	26-44	10-30	6.1-7.3
	44-60	0-10	5.6-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
183:			
McCree	0-5	20-40	6.1-7.3
	5-19	5-15	6.1-7.3
	19-56	5-15	6.6-7.3
	56-60	---	---
Palmont	0-1	20-40	6.1-7.3
	1-11	10-30	6.1-7.3
	11-60	5-15	6.1-7.3
Rock outcrop	0-60	---	---
184:			
McCree	0-5	20-40	6.1-7.3
	5-19	5-15	6.1-7.3
	19-56	5-15	6.6-7.3
	56-60	---	---
Rock outcrop	0-60	---	---
185:			
Mippon	0-10	5-10	6.6-7.8
	10-18	5-10	6.6-7.8
	18-60	5-10	6.6-7.8
186:			
Mippon	0-10	5-10	6.6-7.8
	10-16	5-10	6.6-7.8
	16-60	5-10	6.6-7.8
187:			
Mippon	0-6	1-5	6.1-7.8
	6-18	2-7	6.1-7.8
	18-60	1-5	6.1-7.8
188:			
Morical	0-12	5-12	6.6-7.8
	12-23	2-9	6.6-7.8
	23-37	12-18	6.6-7.8
	37-47	---	---
189:			
Morical	0-12	5-12	6.6-7.8
	12-23	2-9	6.6-7.8
	23-37	12-18	6.6-7.8
	37-47	---	---
190:			
Morical	0-12	5-12	6.6-7.8
	12-23	2-9	6.6-7.8
	23-37	12-18	6.6-7.8
	37-47	---	---
191:			
Morical	0-12	5-12	6.6-7.8
	12-23	2-9	6.6-7.8
	23-37	12-18	6.6-7.8
	37-47	---	---
Dragoon	0-10	10-15	6.1-7.3
	10-27	10-15	6.1-7.3
	27-37	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
192:			
Morical--------------	0-12	5-12	6.6-7.8
	12-23	2-9	6.6-7.8
	23-37	12-18	6.6-7.8
	37-47	---	---
Dragoon--------------	0-8	10-15	6.1-7.3
	8-24	10-15	6.1-7.3
	24-30	---	---
193:			
Morical--------------	0-12	5-12	6.6-7.8
	12-23	2-9	6.6-7.8
	23-37	12-18	6.6-7.8
	37-47	---	---
Dragoon--------------	0-8	10-15	6.1-7.3
	8-24	10-15	6.1-7.3
	24-34	---	---
194:			
Morical--------------	0-12	5-12	6.6-7.8
	12-23	2-9	6.6-7.8
	23-37	12-18	6.6-7.8
	37-47	---	---
Dragoon--------------	0-8	10-15	6.1-7.3
	8-24	10-15	6.1-7.3
	24-30	---	---
195:			
Mountaineer----------	0-4	20-40	5.6-6.5
	4-19	10-30	5.6-6.5
	19-38	10-30	5.6-6.5
	38-42	---	---
196:			
Mountaineer----------	0-4	20-40	5.6-6.5
	4-19	10-30	5.6-6.5
	19-38	10-30	5.6-6.5
	38-42	---	---
Rock outcrop---------	0-60	---	---
197:			
Mountaineer----------	0-4	20-40	5.6-6.5
	4-19	10-30	5.6-6.5
	19-38	10-30	5.6-6.5
	38-42	---	---
Tillicum-------------	0-8	20-40	5.1-6.5
	8-24	10-30	5.6-7.3
	24-42	5-15	6.1-7.3
	42-46	---	---
Rock outcrop---------	0-60	---	---
198:			
Nahahum--------------	0-3	10-20	6.1-7.3
	3-16	10-20	6.1-7.3
	16-44	10-20	6.1-7.3
	44-60	10-20	6.1-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
199:			
Nahahum	0-3	10-20	6.1-7.3
	3-16	10-20	6.1-7.3
	16-44	10-20	6.1-7.3
	44-60	10-20	6.1-7.3
Taneum	0-16	6-11	6.6-7.3
	16-21	5-11	6.6-7.3
	21-47	7-10	6.6-7.3
	47-58	7-9	6.6-7.3
	58-62	---	---
200:			
Nard	0-7	10-20	5.6-7.3
	7-27	15-25	5.6-7.3
	27-67	15-25	6.1-7.3
201:			
Nard	0-7	10-20	5.6-7.3
	7-27	15-25	5.6-7.3
	27-67	15-25	6.1-7.3
202:			
Nard	0-7	10-20	5.6-7.3
	7-27	15-25	5.6-7.3
	27-67	15-25	6.1-7.3
Blag	0-6	10-15	6.6-7.3
	6-16	5-10	6.6-7.3
	16-20	---	---
203:			
Nard	0-7	10-20	5.6-7.3
	7-27	15-25	5.6-7.3
	27-67	15-25	6.1-7.3
Brisky	0-4	5-15	6.1-7.3
	4-10	5-10	6.1-7.3
	10-14	---	---
204:			
Nardine	0-4	0-10	6.1-6.5
	4-17	0-10	6.1-6.5
	17-42	15-25	6.1-6.5
	42-60	5-15	6.1-7.3
205:			
Nardmont	0-15	10-20	6.1-7.3
	15-47	10-20	6.1-7.3
	47-60	10-20	6.1-7.3
206:			
Nardmont	0-15	10-20	6.1-7.3
	15-47	10-20	6.1-7.3
	47-60	10-20	6.1-7.3
207:			
Natapoc	0-6	20-40	6.1-7.3
	6-19	10-30	6.1-7.3
	19-60	1-5	6.1-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
208:			
Natapoc	0-6	20-40	6.1-7.3
	6-19	10-30	6.1-7.3
	19-60	1-5	6.1-7.3
209:			
Natapoc	0-6	20-40	6.1-7.3
	6-19	10-30	6.1-7.3
	19-60	1-5	6.1-7.3
Thow	0-8	20-40	6.1-7.3
	8-22	10-30	6.1-7.3
	22-42	10-30	6.1-7.3
	42-60	5-15	6.1-7.3
210:			
Naxing	0-10	20-40	5.6-6.0
	10-29	10-30	5.1-6.0
	29-60	10-30	5.1-6.0
211:			
Naxing	0-10	20-40	5.6-6.0
	10-29	10-30	5.1-6.0
	29-60	10-30	5.1-6.0
212:			
Newbell	0-11	20-40	5.6-7.3
	11-60	5-10	5.6-7.3
213:			
Nimue	0-2	20-40	4.5-5.5
	2-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
214:			
Nimue	0-7	20-40	4.5-5.5
	7-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
215:			
Nimue	0-2	20-40	4.5-5.5
	2-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
Rock outcrop	0-60	---	---
216:			
Nimue	0-7	20-40	4.5-5.5
	7-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
Nimue, dry	0-2	20-40	4.5-5.5
	2-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
217:			
Nimue, dry	0-2	20-40	4.5-5.5
	2-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
217:			
Nimue	0-7	20-40	4.5-5.5
	7-14	10-30	4.5-6.0
	14-60	5-15	5.1-6.5
Rock outcrop	0-60	---	---
218:			
Oldbutte	0-17	10-15	6.6-7.8
	17-36	15-20	6.6-7.8
	36-60	15-20	6.6-7.8
219:			
Oldbutte	0-17	10-15	6.6-7.8
	17-36	15-20	6.6-7.8
	36-60	15-20	6.6-7.8
220:			
Palmich	0-4	20-40	6.1-7.3
	4-15	20-40	6.1-7.3
	15-26	10-30	6.1-7.3
	26-44	10-30	6.1-7.3
	44-60	0-10	5.6-7.3
221:			
Palmich	0-4	20-40	6.1-7.3
	4-15	20-40	6.1-7.3
	15-26	10-30	6.1-7.3
	26-44	10-30	6.1-7.3
	44-60	0-10	5.6-7.3
222:			
Palmich	0-4	20-40	6.1-7.3
	4-15	20-40	6.1-7.3
	15-26	10-30	6.1-7.3
	26-44	10-30	6.1-7.3
	44-60	0-10	5.6-7.3
223:			
Palmich	0-4	20-40	6.1-7.3
	4-15	20-40	6.1-7.3
	15-26	10-30	6.1-7.3
	26-44	10-30	6.1-7.3
	44-60	0-10	5.6-7.3
McCree	0-5	20-40	6.1-7.3
	5-19	5-15	6.1-7.3
	19-56	5-15	6.6-7.3
	56-60	---	---
224:			
Palmich	0-4	20-40	6.1-7.3
	4-15	20-40	6.1-7.3
	15-26	10-30	6.1-7.3
	26-44	10-30	6.1-7.3
	44-60	0-10	5.6-7.3
McCree	0-5	20-40	6.1-7.3
	5-19	5-15	6.1-7.3
	19-56	5-15	6.6-7.3
	56-60	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
224:			
Rock outcrop	0-60	---	---
225:			
Palmich	0-4	20-40	6.1-7.3
	4-15	20-40	6.1-7.3
	15-26	10-30	6.1-7.3
	26-44	10-30	6.1-7.3
	44-60	0-10	5.6-7.3
Rock outcrop	0-60	---	---
226:			
Palmont	0-5	20-40	6.1-7.3
	5-11	10-30	6.1-7.3
	11-24	5-15	6.1-7.3
	24-60	0-0	6.1-7.3
227:			
Palmont	0-5	20-40	6.1-7.3
	5-11	10-30	6.1-7.3
	11-24	5-15	6.1-7.3
	24-60	0-0	6.1-7.3
228:			
Palmont	0-3	20-40	6.1-7.3
	3-10	10-30	6.1-7.3
	10-25	5-15	6.1-7.3
	25-60	0-0	6.1-7.3
229:			
Palmont	0-5	20-40	6.1-7.3
	5-11	10-30	6.1-7.3
	11-24	5-15	6.1-7.3
	24-60	0-0	6.1-7.3
Rock outcrop	0-60	---	---
230:			
Ramparter	0-11	20-40	6.1-7.3
	11-20	10-30	6.1-7.3
	20-60	10-30	6.1-7.3
231:			
Ramparter	0-2	20-40	6.1-7.3
	2-14	10-30	6.1-7.3
	14-50	10-30	6.1-7.3
	50-60	5-15	6.1-7.3
232:			
Ramparter	0-2	20-40	6.1-7.3
	2-14	10-30	6.1-7.3
	14-50	10-30	6.1-7.3
	50-60	5-15	6.1-7.3
233:			
Ramparter	0-2	20-40	6.1-7.3
	2-14	10-30	6.1-7.3
	14-50	10-30	6.1-7.3
	50-60	5-15	6.1-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
234:			
Ramparter	0-6	20-40	6.1-7.3
	6-15	10-30	6.1-7.3
	15-53	10-30	6.1-7.3
	53-60	5-15	6.1-7.3
235:			
Ramparter	0-6	20-40	6.1-7.3
	6-15	10-30	6.1-7.3
	15-53	10-30	6.1-7.3
	53-60	5-15	6.1-7.3
236:			
Ramparter	0-11	20-40	6.1-7.3
	11-20	10-30	6.1-7.3
	20-60	10-30	6.1-7.3
Wilma	0-4	20-40	6.1-7.3
	4-12	10-30	6.1-7.3
	12-24	5-15	6.1-7.3
	24-37	5-15	6.1-7.3
	37-41	---	---
237:			
Reggad	0-9	20-30	4.5-5.0
	9-60	10-15	5.6-6.0
238:			
Reggad	0-9	20-30	4.5-5.0
	9-60	10-15	5.6-6.0
Serene	0-4	20-40	5.1-6.0
	4-8	10-30	5.1-6.0
	8-13	10-30	5.1-6.0
	13-24	10-15	5.1-6.5
	24-34	---	---
239:			
Rock outcrop	0-60	---	---
240:			
Rock outcrop	0-60	---	---
Blewett	0-3	10-15	6.1-7.3
	3-10	5-10	6.1-7.3
	10-14	---	---
241:			
Rock outcrop	0-60	---	---
Borland	0-6	10-20	6.6-7.8
	6-11	10-20	6.6-7.8
	11-15	---	---
242:			
Rock outcrop	0-60	---	---
Chumstick	0-4	10-20	6.1-7.3
	4-14	10-20	6.1-7.3
	14-19	10-20	6.1-7.3
	19-23	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
242:			
Icicle---------------	0-8	10-15	6.1-7.3
	8-28	10-15	6.1-7.3
	28-50	10-15	6.1-7.3
	50-54	---	---
243:			
Rock outcrop---------	0-60	---	---
Chumstick------------	0-4	10-20	6.1-7.3
	4-14	10-20	6.1-7.3
	14-19	10-20	6.1-7.3
	19-23	---	---
Icicle---------------	0-8	10-15	6.1-7.3
	8-28	10-15	6.1-7.3
	28-50	10-15	6.1-7.3
	50-54	---	---
244:			
Rock outcrop---------	0-60	---	---
Rubble land----------	0-60	---	---
Glaciers, snowfields	0-60	---	---
245:			
Rock outcrop---------	0-60	---	---
Rubble land----------	0-60	---	---
Serene---------------	0-4	20-40	5.1-6.0
	4-8	10-30	5.1-6.0
	8-13	10-30	5.1-6.0
	13-24	10-15	5.1-6.5
	24-34	---	---
246:			
Rubble land----------	0-60	---	---
Rock outcrop---------	0-60	---	---
247:			
Safety---------------	0-3	5-15	6.1-7.3
	3-11	5-15	6.1-7.3
	11-24	5-15	6.1-7.3
	24-34	---	---
248:			
Safety---------------	0-3	5-15	6.1-7.3
	3-11	5-15	6.1-7.3
	11-24	5-15	6.1-7.3
	24-34	---	---
249:			
Safety---------------	0-3	5-15	6.1-7.3
	3-11	5-15	6.1-7.3
	11-24	5-15	6.1-7.3
	24-34	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
250:			
Safety	0-3	5-15	6.1-7.3
	3-11	5-15	6.1-7.3
	11-24	5-15	6.1-7.3
	24-34	---	---
Rock outcrop	0-60	---	---
251:			
Saska	0-6	20-40	5.6-6.5
	6-16	10-30	5.6-6.5
	16-60	5-10	5.6-6.5
252:			
Saska	0-6	20-40	5.6-6.5
	6-16	10-30	5.6-6.5
	16-60	5-10	5.6-6.5
253:			
Saska	0-4	20-40	6.1-7.3
	4-10	10-30	6.1-7.3
	10-36	10-30	6.1-7.3
	36-60	5-10	6.1-7.3
254:			
Saska	0-4	20-40	6.1-7.3
	4-10	10-30	6.1-7.3
	10-36	10-30	6.1-7.3
	36-60	5-10	6.1-7.3
255:			
Saska	0-9	20-40	5.6-6.5
	9-19	10-30	5.6-6.5
	19-60	5-10	5.6-6.5
256:			
Saska	0-9	20-40	5.6-6.5
	9-19	10-30	5.6-6.5
	19-60	5-10	5.6-6.5
257:			
Saska	0-6	20-40	5.6-6.5
	6-16	10-30	5.6-6.5
	16-60	5-10	5.6-6.5
Rock outcrop	0-60	---	---
258:			
Saska	0-6	20-40	5.6-6.5
	6-16	10-30	5.6-6.5
	16-60	5-10	5.6-6.5
Saska, bouldery	0-9	20-40	5.6-6.5
	9-19	10-30	5.6-6.5
	19-60	5-10	5.6-6.5
259:			
Saska, south	0-4	20-40	6.1-7.3
	4-10	10-30	6.1-7.3
	10-36	10-30	6.1-7.3
	36-60	5-10	6.1-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
259:			
Saska	0-9	20-40	5.6-6.5
	9-19	10-30	5.6-6.5
	19-60	5-10	5.6-6.5
260:			
Saska	0-6	20-40	5.6-6.5
	6-16	10-30	5.6-6.5
	16-60	5-10	5.6-6.5
Saska, bouldery	0-9	20-40	5.6-6.5
	9-19	10-30	5.6-6.5
	19-60	5-10	5.6-6.5
261:			
Saska	0-6	20-40	5.6-6.5
	6-16	10-30	5.6-6.5
	16-60	5-10	5.6-6.5
Saska, bouldery	0-9	20-40	5.6-6.5
	9-19	10-30	5.6-6.5
	19-60	5-10	5.6-6.5
Rock outcrop	0-60	---	---
262:			
Saska, south	0-4	20-40	6.1-7.3
	4-10	10-30	6.1-7.3
	10-36	10-30	6.1-7.3
	36-60	5-10	6.1-7.3
Saska	0-6	20-40	5.6-6.5
	6-16	10-30	5.6-6.5
	16-60	5-10	5.6-6.5
Rock outcrop	0-60	---	---
263:			
Saydab	0-8	20-40	5.6-6.5
	8-38	10-30	5.1-6.5
	38-42	---	---
264:			
Scotties	0-10	20-40	5.6-7.3
	10-18	10-15	5.6-7.3
	18-30	10-15	5.6-7.3
	30-44	10-15	5.6-7.3
	44-48	---	---
265:			
Serene	0-4	20-40	5.1-6.0
	4-8	10-30	5.1-6.0
	8-13	10-30	5.1-6.0
	13-24	10-15	5.1-6.5
	24-34	---	---
266:			
Serene	0-4	20-40	5.1-6.0
	4-8	10-30	5.1-6.0
	8-13	10-30	5.1-6.0
	13-24	10-15	5.1-6.5
	24-34	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
266:			
Rock outcrop	0-60	---	---
267:			
Serpen	0-10	10-15	6.6-7.8
	10-34	10-20	6.6-7.8
	34-48	10-20	6.6-7.8
	48-52	---	---
268:			
Serpen	0-10	10-15	6.6-7.8
	10-34	10-20	6.6-7.8
	34-48	10-20	6.6-7.8
	48-52	---	---
269:			
Shadypass	0-3	20-40	6.6-7.3
	3-19	20-40	6.1-7.3
	19-60	10-30	6.6-7.3
270:			
Shamel	0-11	10-15	6.1-7.3
	11-17	10-15	6.1-7.3
	17-38	10-15	6.1-7.3
	38-60	10-15	6.1-7.3
271:			
Shamel	0-11	10-15	6.1-7.3
	11-17	10-15	6.1-7.3
	17-38	10-15	6.1-7.3
	38-60	10-15	6.1-7.3
272:			
Shamel	0-11	10-15	6.1-7.3
	11-17	10-15	6.1-7.3
	17-38	10-15	6.1-7.3
	38-60	10-15	6.1-7.3
Rock outcrop	0-60	---	---
273:			
Shaser	0-9	20-40	6.1-7.3
	9-18	10-30	6.1-7.3
	18-46	10-20	6.1-7.3
	46-60	10-20	6.1-7.3
Blewett	0-3	10-15	6.1-7.3
	3-10	5-10	6.1-7.3
	10-14	---	---
274:			
Shaser	0-9	20-40	6.1-7.3
	9-18	10-30	6.1-7.3
	18-46	10-20	6.1-7.3
	46-60	10-20	6.1-7.3
Brisky	0-4	5-15	6.1-7.3
	4-10	5-10	6.1-7.3
	10-14	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
275:			
Shaser	0-9	20-40	6.1-7.3
	9-18	10-30	6.1-7.3
	18-46	10-20	6.1-7.3
	46-60	10-20	6.1-7.3
Chapot	0-6	10-15	6.1-7.3
	6-14	10-15	6.1-7.3
	14-24	15-20	6.1-7.3
	24-60	15-20	6.1-7.3
276:			
Skipeak	0-7	20-40	5.1-6.0
	7-17	10-30	5.1-6.0
	17-60	5-15	6.1-7.3
277:			
Skipeak	0-7	20-40	5.1-6.0
	7-17	10-30	5.1-6.0
	17-60	5-15	6.1-7.3
Line	0-4	20-40	3.5-6.5
	4-15	10-30	6.1-7.3
	15-60	5-15	6.1-7.3
278:			
Soda	0-11	20-40	5.6-6.5
	11-25	10-30	5.6-6.5
	25-60	5-10	6.1-7.3
279:			
Soda	0-3	20-40	5.6-6.5
	3-18	10-30	5.6-6.5
	18-28	10-30	6.1-6.5
	28-60	5-10	6.1-7.3
280:			
Soda	0-8	20-40	5.6-6.5
	8-22	10-30	5.6-6.5
	22-60	5-10	6.1-7.3
281:			
Soda	0-10	20-40	6.1-7.3
	10-18	10-30	6.1-7.3
	18-50	5-10	6.1-7.3
	50-60	---	---
282:			
Soda	0-10	20-40	6.1-7.3
	10-18	10-30	6.1-7.3
	18-50	5-10	6.1-7.3
	50-60	---	---
283:			
Soda	0-10	20-40	6.1-7.3
	10-18	10-30	6.1-7.3
	18-50	5-10	6.1-7.3
	50-60	---	---
Rock outcrop	0-60	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
284:			
Soda	0-8	20-40	5.6-6.5
	8-22	10-30	5.6-6.5
	22-60	5-10	6.1-7.3
Rock outcrop	0-60	---	---
285:			
Soda	0-11	20-40	5.6-6.5
	11-25	10-30	5.6-6.5
	25-60	5-10	6.1-7.3
Soda, cold	0-8	20-40	5.6-6.5
	8-22	10-30	5.6-6.5
	22-60	5-10	6.1-7.3
286:			
Soda	0-11	20-40	5.6-6.5
	11-25	10-30	5.6-6.5
	25-60	5-10	6.1-7.3
Soda, cold	0-8	20-40	5.6-6.5
	8-22	10-30	5.6-6.5
	22-60	5-10	6.1-7.3
287:			
Soda	0-8	20-40	5.6-6.5
	8-22	10-30	5.6-6.5
	22-60	5-10	6.1-7.3
Soda, cold	0-11	20-40	5.6-6.5
	11-25	10-30	5.6-6.5
	25-60	5-10	6.1-7.3
Rock outcrop	0-60	---	---
288:			
Sodacreek	0-9	20-40	5.6-7.3
	9-20	10-30	6.6-7.3
	20-60	1-4	6.6-7.3
289:			
Sodacreek	0-9	20-40	5.6-7.3
	9-20	10-30	6.6-7.3
	20-60	1-4	6.6-7.3
Rock outcrop	0-60	---	---
290:			
Spodic Vitrixerands	0-7	20-40	6.1-7.3
	7-17	10-30	6.1-7.3
	17-60	5-15	5.6-6.5
Saska	0-6	20-40	5.6-6.5
	6-16	10-30	5.6-6.5
	16-60	5-10	5.6-6.5
291:			
Spodic Vitrixerands	0-7	20-40	6.1-7.3
	7-17	10-30	6.1-7.3
	17-60	5-15	5.6-6.5

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
291:			
Saska----------------	0-6	20-40	5.6-6.5
	6-16	10-30	5.6-6.5
	16-60	5-10	5.6-6.5
292:			
Stemilt--------------	0-10	20-40	6.6-7.3
	10-18	10-30	6.6-7.3
	18-60	10-20	6.6-7.3
293:			
Stemilt--------------	0-10	20-40	6.6-7.3
	10-18	10-30	6.6-7.3
	18-60	10-20	6.6-7.3
294:			
Surgh----------------	0-3	20-40	5.1-7.3
	3-13	10-30	5.6-7.3
	13-21	5-15	5.6-7.3
	21-46	5-15	5.6-7.3
	46-50	---	---
295:			
Surgh----------------	0-3	20-40	5.1-7.3
	3-13	10-30	5.6-7.3
	13-21	5-15	5.6-7.3
	21-46	5-15	5.6-7.3
	46-50	---	---
296:			
Surgh----------------	0-3	20-40	5.1-7.3
	3-13	10-30	5.6-7.3
	13-21	5-15	5.6-7.3
	21-46	5-15	5.6-7.3
	46-50	---	---
297:			
Surgh----------------	0-12	20-40	5.6-7.3
	12-41	10-30	5.6-7.3
	41-60	5-15	5.6-7.3
Wedge----------------	0-5	20-40	4.5-6.5
	5-11	10-30	5.6-7.3
	11-31	10-30	5.6-7.3
	31-60	10-30	5.6-7.3
298:			
Swakane--------------	0-2	3-6	6.6-7.3
	2-15	3-6	6.1-7.3
	15-19	---	---
299:			
Swakane--------------	0-2	3-6	6.6-7.3
	2-15	3-6	6.1-7.3
	15-19	---	---
300:			
Swakane--------------	0-5	3-6	6.6-7.3
	5-16	3-6	6.6-7.8
	16-20	---	---
Rock outcrop---------	0-60	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
301:			
Swakane	0-2	3-6	6.6-7.3
	2-15	3-6	6.1-7.3
	15-19	---	---
Rock outcrop	0-60	---	---
302:			
Switchback	0-10	5-15	6.6-7.3
	10-20	5-15	6.6-7.3
	20-26	5-15	6.6-7.3
	26-36	---	---
303:			
Switchback	0-10	5-15	6.6-7.3
	10-20	5-15	6.6-7.3
	20-26	5-15	6.6-7.3
	26-36	---	---
304:			
Switchback	0-10	5-15	6.6-7.3
	10-20	5-15	6.6-7.3
	20-26	5-15	6.6-7.3
	26-36	---	---
305:			
Taneum	0-16	6-11	6.6-7.3
	16-21	5-11	6.6-7.3
	21-47	7-10	6.6-7.3
	47-58	7-9	6.6-7.3
	58-62	---	---
306:			
Thow	0-8	20-40	6.1-7.3
	8-22	10-30	6.1-7.3
	22-42	10-30	6.1-7.3
	42-60	5-15	6.1-7.3
307:			
Thow	0-8	20-40	6.1-7.3
	8-22	10-30	6.1-7.3
	22-42	10-30	6.1-7.3
	42-60	5-15	6.1-7.3
308:			
Thow	0-8	20-40	6.1-7.3
	8-22	10-30	6.1-7.3
	22-42	10-30	6.1-7.3
	42-60	5-15	6.1-7.3
309:			
Thow	0-8	20-40	6.1-7.3
	8-22	10-30	6.1-7.3
	22-42	10-30	6.1-7.3
	42-60	5-15	6.1-7.3
Domkey	0-3	20-40	6.6-7.3
	3-10	20-40	6.6-7.3
	10-18	10-30	6.6-7.3
	18-35	10-30	6.6-7.3
	35-45	10-30	6.6-7.3
	45-55	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
309:			
Rock outcrop	0-60	---	---
310:			
Thowson	0-14	20-40	6.1-7.3
	14-34	10-30	6.1-7.3
	34-45	10-30	6.1-7.3
	45-60	5-15	6.6-7.8
311:			
Thowson	0-14	20-40	6.1-7.3
	14-34	10-30	6.1-7.3
	34-45	10-30	6.1-7.3
	45-60	5-15	6.6-7.8
312:			
Thowson	0-14	20-40	6.1-7.3
	14-34	10-30	6.1-7.3
	34-45	10-30	6.1-7.3
	45-60	5-15	6.6-7.8
313:			
Thowson	0-14	20-40	6.1-7.3
	14-34	10-30	6.1-7.3
	34-45	10-30	6.1-7.3
	45-60	5-15	6.6-7.8
314:			
Thowson	0-7	20-40	6.1-7.3
	7-42	10-30	6.1-7.3
	42-60	5-15	6.6-7.8
315:			
Thowson	0-7	20-40	6.1-7.3
	7-42	10-30	6.1-7.3
	42-60	5-15	6.6-7.8
Rock outcrop	0-60	---	---
316:			
Thowson	0-7	20-40	6.1-7.3
	7-42	10-30	6.1-7.3
	42-60	5-15	6.6-7.8
Rock outcrop	0-60	---	---
317:			
Thowson	0-7	20-40	6.1-7.3
	7-42	10-30	6.1-7.3
	42-60	5-15	6.6-7.8
Rock outcrop	0-60	---	---
318:			
Thowson, stony	0-7	20-40	6.1-7.3
	7-42	10-30	6.1-7.3
	42-60	5-15	6.6-7.8
Thowson	0-14	20-40	6.1-7.3
	14-34	10-30	6.1-7.3
	34-45	10-30	6.1-7.3
	45-60	5-15	6.6-7.8

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
318:			
Rock outcrop	0-60	---	---
319:			
Tillicum	0-5	20-40	5.1-6.5
	5-22	10-30	5.6-7.3
	22-40	5-15	6.1-7.3
	40-44	---	---
320:			
Tillicum	0-8	20-40	5.1-6.5
	8-24	10-30	5.6-7.3
	24-42	5-15	6.1-7.3
	42-46	---	---
321:			
Tillicum	0-8	20-40	5.1-6.5
	8-24	10-30	5.6-7.3
	24-42	5-15	6.1-7.3
	42-46	---	---
322:			
Tillmont	0-6	20-40	6.1-7.3
	6-20	10-30	6.1-7.3
	20-34	10-30	6.1-7.3
	34-38	10-30	6.1-7.3
	38-46	5-15	6.1-7.3
	46-50	---	---
323:			
Tillmont	0-6	20-40	6.1-7.3
	6-20	10-30	6.1-7.3
	20-34	10-30	6.1-7.3
	34-38	10-30	6.1-7.3
	38-46	5-15	6.1-7.3
	46-50	---	---
324:			
Tillmont	0-6	20-40	6.1-7.3
	6-20	10-30	6.1-7.3
	20-34	10-30	6.1-7.3
	34-38	10-30	6.1-7.3
	38-46	5-15	6.1-7.3
	46-50	---	---
Inkler	0-4	20-40	6.1-7.3
	4-10	5-15	6.1-7.3
	10-29	5-15	6.1-7.3
	29-44	5-15	6.1-7.3
	44-48	---	---
325:			
Tiptop	0-2	20-40	5.6-6.5
	2-28	10-30	5.6-7.3
	28-60	10-30	5.6-7.3
326:			
Tiptop	0-2	20-40	5.6-6.5
	2-28	10-30	5.6-7.3
	28-60	10-30	5.6-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
326:			
Naxing	0-10	20-40	5.6-6.0
	10-29	10-30	5.1-6.0
	29-60	10-30	5.1-6.0
327:			
Totem	0-6	20-40	4.5-6.0
	6-25	10-30	6.1-7.3
	25-33	5-10	6.1-6.5
	33-60	5-10	6.1-6.5
328:			
Totem	0-6	20-40	4.5-6.0
	6-25	10-30	6.1-7.3
	25-33	5-10	6.1-6.5
	33-60	5-10	6.1-6.5
329:			
Totem	0-6	20-40	4.5-6.0
	6-25	10-30	6.1-7.3
	25-33	5-10	6.1-6.5
	33-60	5-10	6.1-6.5
330:			
Totem	0-6	20-40	4.5-6.0
	6-25	10-30	6.1-7.3
	25-33	5-10	6.1-6.5
	33-60	5-10	6.1-6.5
Chiwaukum	0-5	20-40	5.1-6.0
	5-17	10-30	5.1-6.5
	17-26	10-15	5.6-6.5
	26-60	10-15	5.6-6.5
331:			
Treen	0-11	20-40	5.6-6.5
	11-16	10-30	5.6-6.5
	16-20	---	---
332:			
Treen	0-11	20-40	5.6-6.5
	11-16	10-30	5.6-6.5
	16-20	---	---
Klapatche	0-4	20-40	4.5-6.0
	4-12	10-30	5.1-6.0
	12-26	10-15	5.1-6.0
	26-37	1-5	5.1-6.0
	37-47	---	---
333:			
Tronsen	0-9	10-20	6.6-7.3
	9-30	15-25	6.6-7.3
	30-60	15-25	6.6-7.8
334:			
Tronsen	0-9	10-20	6.6-7.3
	9-30	15-25	6.6-7.3
	30-60	15-25	6.6-7.8

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
335:			
Tyee-----------------	0-5	1-4	6.1-7.8
	5-12	1-2	6.1-7.8
	12-16	---	---
336:			
Tyee-----------------	0-11	1-6	6.1-7.8
	11-19	1-2	6.1-7.8
	19-29	---	---
337:			
Tyee-----------------	0-11	1-6	6.1-7.8
	11-19	1-2	6.1-7.8
	19-29	---	---
338:			
Tyee-----------------	0-11	1-6	6.1-7.8
	11-19	1-2	6.1-7.8
	19-29	---	---
Bisping--------------	0-4	20-40	6.1-7.3
	4-30	10-30	6.1-7.3
	30-60	5-10	6.6-7.8
339:			
Typic Cryaquands-----	0-9	20-40	4.5-6.0
	9-15	10-30	5.1-6.0
	15-24	10-30	5.1-6.0
	24-60	10-30	5.1-6.0
340:			
Vabbing--------------	0-3	20-40	5.6-6.5
	3-10	10-30	6.1-6.5
	10-26	10-30	6.1-7.3
	26-60	5-15	6.1-7.3
341:			
Vabbing--------------	0-3	20-40	5.6-6.5
	3-10	10-30	6.1-6.5
	10-26	10-30	6.1-7.3
	26-60	5-15	6.1-7.3
342:			
Vabbing--------------	0-3	20-40	5.6-6.5
	3-10	10-30	6.1-6.5
	10-26	10-30	6.1-7.3
	26-60	5-15	6.1-7.3
Gilpar---------------	0-6	20-40	5.1-6.0
	6-28	10-30	5.1-6.5
	28-60	10-30	5.6-6.5
343:			
Vabbing--------------	0-3	20-40	5.6-6.5
	3-10	10-30	6.1-6.5
	10-26	10-30	6.1-7.3
	26-60	5-15	6.1-7.3
Rock outcrop---------	0-60	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	meq/100 g	pH
344:			
Vabus	0-6	20-40	4.5-6.0
	6-36	10-30	4.5-6.0
	36-60	---	---
345:			
Vabus	0-6	20-40	4.5-6.0
	6-36	10-30	4.5-6.0
	36-60	---	---
346:			
Vabus	0-6	20-40	4.5-6.0
	6-36	10-30	4.5-6.0
	36-60	---	---
Chinkmin	0-4	20-40	4.5-5.5
	4-7	20-40	5.1-6.5
	7-18	10-30	5.1-6.5
	18-36	10-30	5.6-6.5
	36-40	0-10	5.6-6.0
347:			
Vabus	0-6	20-40	4.5-6.0
	6-36	10-30	4.5-6.0
	36-60	---	---
Chinkmin	0-4	20-40	4.5-5.5
	4-7	20-40	5.1-6.5
	7-18	10-30	5.1-6.5
	18-36	10-30	5.6-6.5
	36-40	0-10	5.6-6.0
348:			
Varelum	0-18	10-15	6.6-7.8
	18-42	10-20	6.1-7.3
	42-52	---	---
349:			
Varelum	0-18	10-15	6.6-7.8
	18-42	10-20	6.1-7.3
	42-52	---	---
350:			
Varelum	0-18	10-15	6.6-7.8
	18-42	10-20	6.1-7.3
	42-52	---	---
351:			
Varelum	0-18	10-15	6.6-7.8
	18-42	10-20	6.1-7.3
	42-52	---	---
352:			
Vitricryands	0-12	20-40	5.1-6.5
	12-26	10-30	5.1-6.5
	26-36	---	---
353:			
Vitricryands	0-12	20-40	5.1-6.5
	12-26	10-30	5.1-6.5
	26-36	---	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
353:			
Rock outcrop---------	0-60	---	---
354:			
Wagberg--------------	0-5	20-40	6.6-7.3
	5-13	10-30	6.6-7.3
	13-38	1-8	6.6-7.3
	38-53	1-8	6.6-7.3
	53-60	1-5	6.6-7.3
355:			
Wagberg--------------	0-5	20-40	6.6-7.3
	5-13	10-30	6.6-7.3
	13-38	1-8	6.6-7.3
	38-53	1-8	6.6-7.3
	53-60	1-5	6.6-7.3
356:			
Wagberg--------------	0-4	20-40	6.6-7.3
	4-15	10-30	6.6-7.3
	15-40	1-8	6.6-7.3
	40-60	1-8	6.6-7.3
Wagberg, south-------	0-5	20-40	6.6-7.3
	5-13	10-30	6.6-7.3
	13-38	1-8	6.6-7.3
	38-53	1-8	6.6-7.3
	53-60	1-5	6.6-7.3
357:			
Wagberg--------------	0-5	20-40	6.6-7.3
	5-13	10-30	6.6-7.3
	13-38	1-8	6.6-7.3
	38-53	1-8	6.6-7.3
	53-60	1-5	6.6-7.3
Swakane--------------	0-2	3-6	6.6-7.3
	2-15	3-6	6.1-7.3
	15-19	---	---
Rock outcrop---------	0-60	---	---
358:			
Wedge----------------	0-5	20-40	4.5-6.5
	5-11	10-30	5.6-7.3
	11-31	10-30	5.6-7.3
	31-60	10-30	5.6-7.3
359:			
Wedge----------------	0-5	20-40	4.5-6.5
	5-11	10-30	5.6-7.3
	11-31	10-30	5.6-7.3
	31-60	10-30	5.6-7.3
360:			
Wedge----------------	0-5	20-40	4.5-6.5
	5-17	10-30	5.6-7.3
	17-60	10-30	5.6-7.3

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
361:			
Wedge----------------	0-5	20-40	4.5-6.5
	5-17	10-30	5.6-7.3
	17-60	10-30	5.6-7.3
362:			
Wedge----------------	0-5	20-40	4.5-6.5
	5-17	10-30	5.6-7.3
	17-60	10-30	5.6-7.3
Typic Cryaquands-----	0-9	20-40	4.5-6.0
	9-15	10-30	5.1-6.0
	15-24	10-30	5.1-6.0
	24-60	10-30	5.1-6.0
363:			
Wedge----------------	0-5	20-40	4.5-6.5
	5-11	10-30	5.6-7.3
	11-31	10-30	5.6-7.3
	31-60	10-30	5.6-7.3
Wedge, cold----------	0-5	20-40	4.5-6.5
	5-17	10-30	5.6-7.3
	17-60	10-30	5.6-7.3
364:			
Wedgemont------------	0-1	20-40	6.1-7.3
	1-19	10-30	6.1-6.5
	19-28	10-30	6.1-6.5
	28-60	5-10	6.1-6.5
365:			
Wilma----------------	0-4	20-40	6.1-7.3
	4-12	10-30	6.1-7.3
	12-24	5-15	6.1-7.3
	24-37	5-15	6.1-7.3
	37-41	---	---
366:			
Wilma----------------	0-4	20-40	6.1-7.3
	4-12	10-30	6.1-7.3
	12-24	5-15	6.1-7.3
	24-37	5-15	6.1-7.3
	37-41	---	---
Rock outcrop---------	0-60	---	---
367:			
Yaxing---------------	0-9	10-20	6.6-7.8
	9-21	10-20	6.6-7.8
	21-36	15-25	7.4-7.8
	36-60	10-20	7.4-7.8
368:			
Yaxing---------------	0-9	10-20	6.6-7.8
	9-21	10-20	6.6-7.8
	21-36	15-25	7.4-7.8
	36-60	10-20	7.4-7.8

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Soil reaction
	In	*meq/100 g*	*pH*
369:			
Yaxon----------------	0-14	10-20	6.6-7.8
	14-40	10-20	6.6-7.8
	40-60	10-20	7.4-7.8
370:			
Yaxon----------------	0-14	10-20	6.6-7.8
	14-40	10-20	6.6-7.8
	40-60	10-20	7.4-7.8
371:			
Yaxon----------------	0-14	10-20	6.6-7.8
	14-40	10-20	6.6-7.8
	40-60	10-20	7.4-7.8
372:			
Yaxon----------------	0-14	10-20	6.6-7.8
	14-40	10-20	6.6-7.8
	40-60	10-20	7.4-7.8
373:			
Yaxon----------------	0-16	10-20	6.6-7.8
	16-54	10-20	6.6-7.8
	54-60	10-20	7.4-7.8
374:			
Zeb------------------	0-2	10-20	6.1-7.3
	2-11	10-20	6.1-7.3
	11-28	10-20	6.1-7.3
	28-60	10-20	6.1-7.3
W:			
Water----------------	---	---	---

Table 17.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
1:							
Aeric Fluvaquents	---	---	---	---	High	High	Low
2:							
Almac	---	---	---	---	High	Moderate	Moderate
3:							
Almac	---	---	---	---	High	Moderate	Moderate
4:							
Almac	---	---	---	---	High	Moderate	Moderate
5:							
Almac	---	---	---	---	High	Moderate	Moderate
Azwell	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
6:							
Almac	---	---	---	---	High	Moderate	Moderate
Azwell	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
7:							
Almac	---	---	---	---	High	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
8:							
Alnult	---	---	---	---	Moderate	Moderate	Moderate
Reggad	Strongly contrasting textural stratification	7-10	---	---	Low	Moderate	Moderate
9:							
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
10:							
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
11:							
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
12:							
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
13:							
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
Alnult	---	---	---	---	Moderate	Moderate	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
14:							
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
Alnult	---	---	---	---	Moderate	Moderate	Moderate
15:							
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
Alnult	---	---	---	---	Moderate	Moderate	Moderate
16:							
Anatone	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Blewett	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
17:							
Anatone	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
18:							
Andic Cryochrepts	Bedrock (lithic)	20-80	---	Indurated	Moderate	Moderate	Moderate
19:							
Andic Cryumbrepts	---	---	---	---	Moderate	Moderate	Moderate
20:							
Andic Cryumbrepts	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
21:							
Andic Cryumbrepts	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Haplocryods	---	---	---	---	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
22:							
Andic Cryumbrepts	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
23:							
Andic Cryumbrepts	Bedrock (lithic)	20-60	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
24:							
Andic Haplumbrepts	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
25:							
Angle	---	---	---	---	Low	Moderate	Moderate
26:							
Aquic Cryumbrepts	---	---	---	---	Moderate	High	High
27:							
Ardening	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
28:							
Ardenmont	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
29:							
Ardenmont	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
30:							
Ardenmont	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
31:							
Ardenmont	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
Swakane	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
32:							
Ardenvoir	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
33:							
Ardenvoir	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
34:							
Azwell	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
35:							
Bagmont	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
36:							
Bigcreek	Strongly contrasting textural stratification	12-20	---	---	Moderate	Moderate	Low
37:							
Billyridge	---	---	---	---	Moderate	Moderate	Low
38:							
Billyridge	---	---	---	---	Moderate	Moderate	Low
39:							
Billyridge	---	---	---	---	Moderate	Moderate	Low
40:							
Bisping	---	---	---	---	High	Moderate	Low
41:							
Bisping	---	---	---	---	High	Moderate	Low
42:							
Bisping	---	---	---	---	High	Moderate	Low
43:							
Bjork	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
44:							
Bjork------------------	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
45:							
Blag-------------------	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Cle Elum---------------	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Moderate
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
46:							
Blag-------------------	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
47:							
Blewett----------------	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
48:							
Borland----------------	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
49:							
Borland----------------	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
50:							
Brief------------------	---	---	---	---	Moderate	High	Low
51:							
Brisky-----------------	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
52:							
Burch------------------	---	---	---	---	Moderate	Moderate	Low
53:							
Burnscreek-------------	---	---	---	---	Moderate	Moderate	Low
54:							
Burrant----------------	---	---	---	---	Moderate	Moderate	Low
55:							
Burrant----------------	---	---	---	---	Moderate	Moderate	Low
56:							
Cashmont---------------	Strongly contrasting textural stratification	40-80	---	---	Moderate	Moderate	Low
57:							
Cashmont---------------	Strongly contrasting textural stratification	40-80	---	---	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
58:							
Chapot	---	---	---	---	Moderate	Moderate	Low
59:							
Chinkmin	Dense material	20-40	4-17	Noncemented	High	High	High
60:							
Chinkmin	Dense material	20-40	4-17	Noncemented	High	High	High
61:							
Chinkmin	Dense material	20-40	4-17	Noncemented	High	High	High
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
62:							
Chinkmin	Dense material	20-40	4-17	Noncemented	High	High	High
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
63:							
Chiwaukum	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Moderate
64:							
Chiwaukum	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Moderate
65:							
Chiwaukum	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Moderate
66:							
Chiwaukum	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Moderate
67:							
Chiwaukum	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Moderate
Chiwaukum, south	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Moderate
68:							
Chiwaukum	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
68:							
Chiwaukum, south-------	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Moderate
69:							
Chiwawa----------------	Strongly contrasting textural stratification	40-60	---	---	Moderate	Moderate	Moderate
70:							
Choralmont, till substratum------------	Strongly contrasting textural stratification	15-40	---	---	Moderate	Moderate	Moderate
Choralmont-------------	Strongly contrasting textural stratification	15-40	---	---	Moderate	Moderate	Moderate
71:							
Choralmont-------------	Strongly contrasting textural stratification	15-40	---	---	Moderate	Moderate	Moderate
72:							
Choralmont-------------	Strongly contrasting textural stratification	15-40	---	---	Moderate	Moderate	Moderate
73:							
Choralmont-------------	Strongly contrasting textural stratification	15-40	---	---	Moderate	Moderate	Moderate
74:							
Choralmont-------------	Strongly contrasting textural stratification	15-40	---	---	Moderate	Moderate	Moderate
75:							
Choralmont-------------	Strongly contrasting textural stratification	15-40	---	---	Moderate	Moderate	Moderate
Limking----------------	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
76:							
Chumstick--------------	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
77:							
Chumstick--------------	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
78:							
Chumstick	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
79:							
Cle Elum	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Moderate
80:							
Cle Elum	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Moderate
81:							
Coopmont	Strongly contrasting textural stratification	25-36	---	---	High	Moderate	Low
82:							
Coopmont	Strongly contrasting textural stratification	25-36	---	---	High	Moderate	Low
83:							
Cowiche	Bedrock (paralithic)	40-60	---	Moderately cemented	High	High	Low
Cowiche, very deep	---	---	---	---	High	High	Low
84:							
Cowiche	Bedrock (paralithic)	40-60	---	Moderately cemented	High	High	Low
Cowiche, very deep	---	---	---	---	High	High	Low
85:							
Cryomont	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Moderate
86:							
Cryomont	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Moderate
87:							
Cryomont	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Moderate
Cryomont, fan	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Moderate
88:							
Culving	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
89:							
Culvop	Bedrock (lithic)	10-20	---	Indurated	High	Moderate	Moderate
90:							
Devore	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
91:							
Dinkelman	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
92:							
Dinkelman	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
93:							
Dinkelman	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
94:							
Dinkels	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
95:							
Dinkels	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
96:							
Dinkels	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
97:							
Domkey	Bedrock (paralithic)	40-60	---	Moderately cemented	High	Moderate	Low
98:							
Domkey	Bedrock (paralithic)	40-60	---	Moderately cemented	High	Moderate	Low
99:							
Domkey	Bedrock (paralithic)	40-60	---	Moderately cemented	High	Moderate	Low
McCree	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
100:							
Dragoon	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
101:							
Dragoon	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
102:							
Entiat	Bedrock (paralithic)	12-20	---	Moderately cemented	Moderate	Moderate	Low
103:							
Entiat	Bedrock (paralithic)	12-20	---	Moderately cemented	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
104:							
Entic Haplumbrepts-----	Bedrock (lithic)	20-80	---	Indurated	Moderate	Moderate	Low
105:							
Esmeralda--------------	---	---	---	---	Moderate	Moderate	Moderate
106:							
Esmeralda--------------	---	---	---	---	Moderate	Moderate	Moderate
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
107:							
Fears------------------	---	---	---	---	Moderate	Moderate	Moderate
108:							
Fears------------------	---	---	---	---	Moderate	Moderate	Moderate
Devore-----------------	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
109:							
Fernow-----------------	Strongly contrasting textural stratification	20-30	---	---	High	High	High
110:							
Fernow-----------------	Strongly contrasting textural stratification	20-30	---	---	High	High	High
111:							
Fernow-----------------	Strongly contrasting textural stratification	20-30	---	---	High	High	High
Serene-----------------	Bedrock (paralithic)	20-40	---	Moderately cemented	Low	Moderate	Moderate
112:							
Fluvaquents------------	---	---	---	---	High	High	Moderate
113:							
Georgecreek------------	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
114:							
Georgecreek------------	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
115:							
Georgecreek------------	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
116:							
Georgecreek------------	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
Dragoon----------------	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
117:							
Georgecreek	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
Dragoon	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
118:							
Gilpar	---	---	---	---	Moderate	Moderate	Moderate
119:							
Gilpar	---	---	---	---	Moderate	Moderate	Moderate
Nimue	---	---	---	---	Moderate	High	High
120:							
Gilpar	---	---	---	---	Moderate	Moderate	Moderate
Nimue	---	---	---	---	Moderate	High	High
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
121:							
Gilpar	---	---	---	---	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
122:							
Glaciers, snowfields	---	---	---	---	None	---	---
123:							
Goffpeak	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
124:							
Goffpeak	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
Fears	---	---	---	---	Moderate	Moderate	Moderate
125:							
Haplocryods, cold	Bedrock (lithic)	20-40	---	Indurated	High	Moderate	Moderate
Haplocryods, stony	---	---	---	---	Moderate	Moderate	Low
126:							
Haplocryods	Bedrock (lithic)	20-60	---	Indurated	Moderate	Moderate	Moderate
Andic Cryochrepts	Bedrock (lithic)	20-80	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
127:							
Haploxerolls	---	---	---	---	Moderate	Moderate	Low
128:							
Haploxerolls	---	---	---	---	Moderate	Moderate	Low
129:							
Humicryods	Bedrock (paralithic)	20-60	---	Moderately cemented	High	Moderate	High
Andic Cryumbrepts	---	---	---	---	Moderate	Moderate	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
130:							
Humicryods	Bedrock (paralithic)	20-60	---	Moderately cemented	High	Moderate	High
Andic Cryochrepts	---	---	---	---	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
131:							
Humicryods	Bedrock (paralithic)	20-80	---	Moderately cemented	High	Moderate	High
Andic Cryumbrepts	Bedrock (lithic)	20-80	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
132:							
Hyprairie	---	---	---	---	Moderate	Moderate	Low
133:							
Hyprairie	---	---	---	---	Moderate	Moderate	Low
134:							
Hyprairie	---	---	---	---	Moderate	Moderate	Low
Oldbutte	---	---	---	---	Moderate	Moderate	Low
135:							
Icicle, south	---	---	---	---	Moderate	Moderate	Low
Icicle	---	---	---	---	Moderate	Moderate	Low
136:							
Icicle	---	---	---	---	Moderate	Moderate	Low
137:							
Icicle	---	---	---	---	Moderate	Moderate	Low
138:							
Icicle	---	---	---	---	Moderate	Moderate	Low
139:							
Icicle	---	---	---	---	Moderate	Moderate	Low
140:							
Icicle	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
Chumstick	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
141:							
Icicle	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
Chumstick	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
142:							
Inkler	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
143:							
Isella	---	---	---	---	High	Moderate	Moderate
Fernow	Strongly contrasting textural stratification	20-30	---	---	High	High	High
144:							
Isella	---	---	---	---	High	Moderate	Moderate
Fernow	Strongly contrasting textural stratification	20-30	---	---	High	High	High
145:							
Isella	---	---	---	---	High	Moderate	Moderate
Nimue	---	---	---	---	Moderate	High	High
146:							
Isella	---	---	---	---	High	Moderate	Moderate
Nimue	---	---	---	---	Moderate	High	High
147:							
Kingmont	---	---	---	---	Low	Moderate	Low
148:							
Kladnick	---	---	---	---	Low	Moderate	Moderate
149:							
Kladnick	---	---	---	---	Low	Moderate	Moderate
150:							
Kladnick	---	---	---	---	Low	Moderate	Moderate
151:							
Klapatche	Bedrock (paralithic)	20-40	---	Moderately cemented	Low	High	High
Altapeak	Bedrock (paralithic)	40-60	---	Moderately cemented	Low	High	High
152:							
Kloochman	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
153:							
Kloochman	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
154:							
Kloochman	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
155:							
Kloochman	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Inkler	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
156:							
Kloochman	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
156:							
Inkler	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
157:							
Kloochman	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
158:							
Limking	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
159:							
Limking	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
Coopmont	Strongly contrasting textural stratification	25-36	---	---	High	Moderate	Low
160:							
Limking	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
Coopmont	Strongly contrasting textural stratification	25-36	---	---	High	Moderate	Low
161:							
Limking	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
Coopmont	Strongly contrasting textural stratification	25-36	---	---	High	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
162:							
Limking	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
163:							
Line	Strongly contrasting textural stratification	15-25	---	---	Moderate	Moderate	Moderate
164:							
Line	Strongly contrasting textural stratification	15-25	---	---	Moderate	Moderate	Moderate
165:							
Line	Strongly contrasting textural stratification	15-25	---	---	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
166:							
Line	Strongly contrasting textural stratification	15-25	---	---	Moderate	Moderate	Moderate
Vabbing	---	---	---	---	Moderate	Moderate	Moderate
167:							
Loneridge	---	---	---	---	Moderate	Moderate	Moderate
168:							
Loneridge	---	---	---	---	Moderate	Moderate	Moderate
169:							
Loneridge	---	---	---	---	Moderate	Moderate	Moderate
170:							
Macreeing	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
171:							
Macreeing	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
172:							
Macreeing	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
173:							
Mansonia	---	---	---	---	High	Moderate	Low
174:							
Mansonia	Bedrock (lithic)	40-60	---	Indurated	High	Moderate	Low
Swakane	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
175:							
Mansonia	Bedrock (lithic)	40-60	---	Indurated	High	Moderate	Low
Swakane	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
176:							
Marmont	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Low
177:							
Marmont	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Low
178:							
Marmont	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
179:							
McCree	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
180:							
McCree	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
181:							
McCree	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
182:							
McCree	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
Palmich	---	---	---	---	Moderate	Moderate	Moderate
183:							
McCree	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
Palmont	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
184:							
McCree	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
185:							
Mippon	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Low
186:							
Mippon	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Low
187:							
Mippon	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Low
188:							
Morical	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
189:							
Morical	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
190:							
Morical	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
191:							
Morical	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
191:							
Dragoon	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
192:							
Morical	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
Dragoon	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
193:							
Morical	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
Dragoon	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
194:							
Morical	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
Dragoon	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
195:							
Mountaineer	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Low
196:							
Mountaineer	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
197:							
Mountaineer	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Low
Tillicum	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
198:							
Nahahum	---	---	---	---	Moderate	Moderate	Low
199:							
Nahahum	---	---	---	---	Moderate	Moderate	Low
Taneum	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
200:							
Nard	---	---	---	---	High	Moderate	Moderate
201:							
Nard	---	---	---	---	High	Moderate	Moderate
202:							
Nard	---	---	---	---	High	Moderate	Moderate
Blag	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
203:							
Nard	---	---	---	---	High	Moderate	Moderate
Brisky	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
204:							
Nardine	---	---	---	---	Moderate	Moderate	Low
205:							
Nardmont	---	---	---	---	Moderate	Moderate	Low
206:							
Nardmont	---	---	---	---	Moderate	Moderate	Low
207:							
Natapoc	Strongly contrasting textural stratification	18-24	---	---	Moderate	Moderate	Low
208:							
Natapoc	Strongly contrasting textural stratification	18-24	---	---	Moderate	Moderate	Low
209:							
Natapoc	Strongly contrasting textural stratification	18-24	---	---	Moderate	Moderate	Low
Thow	Strongly contrasting textural stratification	40-60	---	---	Moderate	Moderate	Low
210:							
Naxing	---	---	---	---	High	Moderate	Moderate
211:							
Naxing	---	---	---	---	High	Moderate	Moderate
212:							
Newbell	Strongly contrasting textural stratification	10-20	---	---	Moderate	Moderate	Moderate
213:							
Nimue	---	---	---	---	Moderate	High	High
214:							
Nimue	---	---	---	---	Moderate	High	High
215:							
Nimue	---	---	---	---	Moderate	High	High
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
216:							
Nimue	---	---	---	---	Moderate	High	High
Nimue, dry	---	---	---	---	Moderate	High	High
217:							
Nimue, dry	---	---	---	---	Moderate	High	High

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
217:							
Nimue------------------	---	---	---	---	Moderate	High	High
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
218:							
Oldbutte---------------	---	---	---	---	Moderate	Moderate	Low
219:							
Oldbutte---------------	---	---	---	---	Moderate	Moderate	Low
220:							
Palmich----------------	---	---	---	---	Moderate	Moderate	Moderate
221:							
Palmich----------------	---	---	---	---	Moderate	Moderate	Moderate
222:							
Palmich----------------	---	---	---	---	Moderate	Moderate	Moderate
223:							
Palmich----------------	---	---	---	---	Moderate	Moderate	Moderate
McCree-----------------	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
224:							
Palmich----------------	---	---	---	---	Moderate	Moderate	Moderate
McCree-----------------	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
225:							
Palmich----------------	---	---	---	---	Moderate	Moderate	Moderate
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
226:							
Palmont----------------	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Low
227:							
Palmont----------------	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Low
228:							
Palmont----------------	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Low
229:							
Palmont----------------	Strongly contrasting textural stratification	10-20	---	---	Low	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
230:							
Ramparter	Strongly contrasting textural stratification	12-20	---	---	Moderate	Moderate	Low
231:							
Ramparter	Strongly contrasting textural stratification	12-20	---	---	Moderate	Moderate	Low
232:							
Ramparter	Strongly contrasting textural stratification	12-20	---	---	Moderate	Moderate	Low
233:							
Ramparter	Strongly contrasting textural stratification	12-20	---	---	Moderate	Moderate	Low
234:							
Ramparter	Strongly contrasting textural stratification	12-20	---	---	Moderate	Moderate	Low
235:							
Ramparter	Strongly contrasting textural stratification	12-20	---	---	Moderate	Moderate	Low
236:							
Ramparter	Strongly contrasting textural stratification	12-20	---	---	Moderate	Moderate	Low
Wilma	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
237:							
Reggad	Strongly contrasting textural stratification	7-10	---	---	Low	Moderate	Moderate
238:							
Reggad	Strongly contrasting textural stratification	7-10	---	---	Low	Moderate	Moderate
Serene	Bedrock (paralithic)	20-40	---	Moderately cemented	Low	Moderate	Moderate
239:							
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
240:							
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
Blewett	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
241:							
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
Borland	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
242:							
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
Chumstick	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Icicle	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
243:							
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
Chumstick	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Icicle	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
244:							
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	---	---	---
Rubble land	Bedrock (lithic)	40-60	---	Indurated	---	---	---
Glaciers, snowfields.							
245:							
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
Rubble land	Bedrock (lithic)	40-60	---	Indurated	---	---	---
Serene	Bedrock (paralithic)	20-40	---	Moderately cemented	Low	Moderate	Moderate
246:							
Rubble land	Bedrock (lithic)	40-40	---	Indurated	---	---	---
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
247:							
Safety	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
248:							
Safety	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
249:							
Safety	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
250:							
Safety	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
251:							
Saska------------------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
252:							
Saska------------------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
253:							
Saska------------------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Low
254:							
Saska------------------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Low
255:							
Saska------------------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
256:							
Saska------------------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
257:							
Saska------------------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
258:							
Saska------------------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
Saska, bouldery--------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
259:							
Saska, south-----------	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
259:							
Saska	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
260:							
Saska	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
Saska, bouldery	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
261:							
Saska	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
Saska, bouldery	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
262:							
Saska, south	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Low
Saska	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
263:							
Saydab	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
264:							
Scotties	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
265:							
Serene	Bedrock (paralithic)	20-40	---	Moderately cemented	Low	Moderate	Moderate
266:							
Serene	Bedrock (paralithic)	20-40	---	Moderately cemented	Low	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
267:							
Serpen	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
268:							
Serpen	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
269:							
Shadypass	Strongly contrasting textural stratification	15-30	---	---	Moderate	Moderate	Moderate
270:							
Shamel	---	---	---	---	Moderate	Moderate	Low
271:							
Shamel	---	---	---	---	Moderate	Moderate	Low
272:							
Shamel	---	---	---	---	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
273:							
Shaser	---	---	---	---	Moderate	Moderate	Low
Blewett	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
274:							
Shaser	---	---	---	---	Moderate	Moderate	Low
Brisky	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
275:							
Shaser	---	---	---	---	Moderate	Moderate	Low
Chapot	---	---	---	---	Moderate	Moderate	Low
276:							
Skipeak	---	---	---	---	Moderate	Moderate	Moderate
277:							
Skipeak	---	---	---	---	Moderate	Moderate	Moderate
Line	Strongly contrasting textural stratification	15-25	---	---	Moderate	Moderate	Moderate
278:							
Soda	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate
279:							
Soda	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate
280:							
Soda	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
281:							
Soda-------------------	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Low
	Dense material	40-60	0-3	Noncemented			
282:							
Soda-------------------	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Low
	Dense material	40-60	0-3	Noncemented			
283:							
Soda-------------------	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Low
	Dense material	40-60	0-3	Noncemented			
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
284:							
Soda-------------------	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
285:							
Soda-------------------	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate
Soda, cold-------------	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate
286:							
Soda-------------------	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate
Soda, cold-------------	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate
287:							
Soda-------------------	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
287:							
Soda, cold	Strongly contrasting textural stratification	14-30	---	---	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
288:							
Sodacreek	---	---	---	---	High	Moderate	Moderate
289:							
Sodacreek	---	---	---	---	High	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
290:							
Spodic Vitrixerands	---	---	---	---	High	Moderate	Moderate
Saska	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
291:							
Spodic Vitrixerands	---	---	---	---	High	Moderate	Moderate
Saska	Strongly contrasting textural stratification	14-36	---	---	Moderate	Moderate	Moderate
292:							
Stemilt	---	---	---	---	Moderate	Moderate	Low
293:							
Stemilt	---	---	---	---	Moderate	Moderate	Low
294:							
Surgh	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
295:							
Surgh	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
296:							
Surgh	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
297:							
Surgh	---	---	---	---	Moderate	Moderate	Moderate
Wedge	Strongly contrasting textural stratification	17-35	---	---	Low	Moderate	Moderate
298:							
Swakane	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
299:							
Swakane	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
300:							
Swakane	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
301:							
Swakane	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
302:							
Switchback	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
303:							
Switchback	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
304:							
Switchback	Bedrock (paralithic)	20-40	---	Moderately cemented	Moderate	Moderate	Low
305:							
Taneum	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
306:							
Thow	Strongly contrasting textural stratification	40-60	---	---	Moderate	Moderate	Low
307:							
Thow	Strongly contrasting textural stratification	40-60	---	---	Moderate	Moderate	Low
308:							
Thow	Strongly contrasting textural stratification	40-60	---	---	Moderate	Moderate	Low
309:							
Thow	Strongly contrasting textural stratification	40-60	---	---	Moderate	Moderate	Low
Domkey	Bedrock (paralithic)	40-60	---	Moderately cemented	High	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
310:							
Thowson	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
311:							
Thowson----------------	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low
312:							
Thowson----------------	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low
313:							
Thowson----------------	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low
314:							
Thowson----------------	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low
315:							
Thowson----------------	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
316:							
Thowson----------------	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
317:							
Thowson----------------	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---
318:							
Thowson, stony---------	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low
Thowson----------------	Strongly contrasting textural stratification	40-80	---	---	High	Moderate	Low
Rock outcrop-----------	Bedrock (lithic)	0-0	---	Indurated	None	---	---

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
319:							
Tillicum	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
320:							
Tillicum	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
321:							
Tillicum	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
322:							
Tillmont	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
323:							
Tillmont	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
324:							
Tillmont	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Low
Inkler	Bedrock (lithic)	40-60	---	Indurated	Moderate	Moderate	Moderate
325:							
Tiptop	---	---	---	---	Moderate	Moderate	Moderate
326:							
Tiptop	---	---	---	---	Moderate	Moderate	Moderate
Naxing	---	---	---	---	High	Moderate	Moderate
327:							
Totem	Strongly contrasting textural stratification	17-35	---	---	High	High	High
328:							
Totem	Strongly contrasting textural stratification	17-35	---	---	High	High	High
329:							
Totem	Strongly contrasting textural stratification	17-35	---	---	High	High	High
330:							
Totem	Strongly contrasting textural stratification	17-35	---	---	High	High	High
Chiwaukum	Strongly contrasting textural stratification	20-40	---	---	Moderate	Moderate	Moderate
331:							
Treen	Bedrock (lithic)	10-20	---	Indurated	High	Moderate	High
332:							
Treen	Bedrock (lithic)	10-20	---	Indurated	High	Moderate	High

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
332:							
Klapatche	Bedrock (paralithic)	20-40	---	Moderately cemented	Low	High	High
333:							
Tronsen	---	---	---	---	Moderate	Moderate	Low
334:							
Tronsen	---	---	---	---	Moderate	Moderate	Low
335:							
Tyee	Bedrock (paralithic)	10-20	---	Moderately cemented	Moderate	Moderate	Low
336:							
Tyee	Bedrock (paralithic)	10-20	---	Moderately cemented	Moderate	Moderate	Low
337:							
Tyee	Bedrock (paralithic)	10-20	---	Moderately cemented	Moderate	Moderate	Low
338:							
Tyee	Bedrock (paralithic)	10-20	---	Moderately cemented	Moderate	Moderate	Low
Bisping	---	---	---	---	High	Moderate	Low
339:							
Typic Cryaquands	Strongly contrasting textural stratification	24-80	---	---	High	High	High
340:							
Vabbing	---	---	---	---	Moderate	Moderate	Moderate
341:							
Vabbing	---	---	---	---	Moderate	Moderate	Moderate
342:							
Vabbing	---	---	---	---	Moderate	Moderate	Moderate
Gilpar	---	---	---	---	Moderate	Moderate	Moderate
343:							
Vabbing	---	---	---	---	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
344:							
Vabus	Dense material	20-40	---	Noncemented	Moderate	High	High
345:							
Vabus	Dense material	20-40	---	Noncemented	Moderate	High	High
346:							
Vabus	Dense material	20-40	---	Noncemented	Moderate	High	High
Chinkmin	Dense material	20-40	4-17	Noncemented	High	High	High

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
347:							
Vabus	Dense material	20-40	---	Noncemented	Moderate	High	High
Chinkmin	Dense material	20-40	4-17	Noncemented	High	High	High
348:							
Varelum	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
349:							
Varelum	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
350:							
Varelum	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
351:							
Varelum	Bedrock (paralithic)	40-60	---	Moderately cemented	Moderate	Moderate	Low
352:							
Vitricryands	Bedrock (paralithic)	20-60	---	Moderately cemented	Moderate	Moderate	High
353:							
Vitricryands	Bedrock (paralithic)	20-60	---	Moderately cemented	Moderate	Moderate	High
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
354:							
Wagberg	---	---	---	---	Moderate	Moderate	Low
355:							
Wagberg	---	---	---	---	Moderate	Moderate	Low
356:							
Wagberg	---	---	---	---	Moderate	Moderate	Low
Wagberg, south	---	---	---	---	Moderate	Moderate	Low
357:							
Wagberg	---	---	---	---	Moderate	Moderate	Low
Swakane	Bedrock (lithic)	10-20	---	Indurated	Moderate	Moderate	Low
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
358:							
Wedge	Strongly contrasting textural stratification	17-35	---	---	Low	Moderate	Moderate
359:							
Wedge	Strongly contrasting textural stratification	17-35	---	---	Low	Moderate	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
360:							
Wedge	Strongly contrasting textural stratification	17-35	---	---	Low	Moderate	Moderate
361:							
Wedge	Strongly contrasting textural stratification	17-35	---	---	Low	Moderate	Moderate
362:							
Wedge	Strongly contrasting textural stratification	17-35	---	---	Low	Moderate	Moderate
Typic Cryaquands	Strongly contrasting textural stratification	24-80	---	---	High	High	High
363:							
Wedge	Strongly contrasting textural stratification	17-35	---	---	Low	Moderate	Moderate
Wedge, cold	Strongly contrasting textural stratification	17-35	---	---	Low	Moderate	Moderate
364:							
Wedgemont	---	---	---	---	Moderate	Moderate	Moderate
365:							
Wilma	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
366:							
Wilma	Bedrock (lithic)	20-40	---	Indurated	Moderate	Moderate	Moderate
Rock outcrop	Bedrock (lithic)	0-0	---	Indurated	None	---	---
367:							
Yaxing	---	---	---	---	Moderate	Moderate	Low
368:							
Yaxing	---	---	---	---	Moderate	Moderate	Low
369:							
Yaxon	---	---	---	---	Moderate	Moderate	Low
370:							
Yaxon	---	---	---	---	Moderate	Moderate	Low
371:							
Yaxon	---	---	---	---	Moderate	Moderate	Low
372:							
Yaxon	---	---	---	---	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	*In*				
373:							
Yaxon------------------	---	---	---	---	Moderate	Moderate	Low
374:							
Zeb--------------------	---	---	---	---	Moderate	Moderate	Low
W.							
Water							

Table 18.--Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
1:									
Aeric Fluvaquents---------	C								
		January	3.0-3.7	>6.0	---	---	None	---	None
		February	1.3-2.3	>6.0	---	---	None	Brief	Occasional
		March	0.7-1.3	>6.0	---	---	None	Brief	Occasional
		April	0.7-1.3	>6.0	---	---	None	Brief	Occasional
		May	1.3-2.3	>6.0	---	---	None	Brief	Occasional
		June	3.0-3.7	>6.0	---	---	None	---	None
		July	3.7-6.0	>6.0	---	---	None	---	None
		August	3.7-6.0	>6.0	---	---	None	---	None
		September	3.7-6.0	>6.0	---	---	None	---	None
		October	3.7-6.0	>6.0	---	---	None	---	None
		November	3.7-6.0	>6.0	---	---	None	---	None
		December	3.7-6.0	>6.0	---	---	None	---	None
2:									
Almac---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
3:									
Almac---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
4:									
Almac---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
5:									
Almac---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Azwell--------------------	C								
		Jan-Dec	---	---	---	---	None	---	None
6:									
Almac---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Azwell--------------------	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
7:									
Almac---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
8:									
Alnult--------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Reggad--------------------	A								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
9:									
Altapeak	B								
		Jan-Dec	---	---	---	---	None	---	None
10:									
Altapeak	B								
		Jan-Dec	---	---	---	---	None	---	None
11:									
Altapeak	B								
		Jan-Dec	---	---	---	---	None	---	None
12:									
Altapeak	B								
		Jan-Dec	---	---	---	---	None	---	None
13:									
Altapeak	B								
		Jan-Dec	---	---	---	---	None	---	None
Alnult	B								
		Jan-Dec	---	---	---	---	None	---	None
14:									
Altapeak	B								
		Jan-Dec	---	---	---	---	None	---	None
Alnult	B								
		Jan-Dec	---	---	---	---	None	---	None
15:									
Altapeak	B								
		Jan-Dec	---	---	---	---	None	---	None
Alnult	B								
		Jan-Dec	---	---	---	---	None	---	None
16:									
Anatone	D								
		Jan-Dec	---	---	---	---	None	---	None
Blewett	D								
		Jan-Dec	---	---	---	---	None	---	None
17:									
Anatone	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
18:									
Andic Cryochrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
19:									
Andic Cryumbrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
20:									
Andic Cryumbrepts	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
21:									
Andic Cryumbrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
Haplocryods	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
22:									
Andic Cryumbrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
23:									
Andic Cryumbrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
24:									
Andic Haplumbrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
25:									
Angle	A								
		Jan-Dec	---	---	---	---	None	---	None
26:									
Aquic Cryumprepts	C								
		January	0.0-0.3	>6.0	0.0-1.0	Brief	None	Long	Frequent
		February	0.0-0.3	>6.0	0.0-1.0	Brief	None	Long	Frequent
		March	0.0-0.3	>6.0	0.0-1.0	Brief	None	Long	Frequent
		April	0.0-0.3	>6.0	0.0-1.0	Brief	None	Long	Frequent
		May	0.3-0.7	>6.0	---	---	None	---	None
		June	0.7-1.2	>6.0	---	---	None	---	None
		July	2.4-3.9	>6.0	---	---	None	---	None
		August	3.9-6.0	>6.0	---	---	None	---	None
		September	3.9-6.0	>6.0	---	---	None	---	None
		October	2.4-3.9	>6.0	---	---	None	---	None
		November	0.7-1.2	>6.0	---	---	None	Long	Frequent
		December	0.3-0.7	>6.0	---	---	None	Long	Frequent
27:									
Ardening	B								
		Jan-Dec	---	---	---	---	None	---	None
28:									
Ardenmont	B								
		Jan-Dec	---	---	---	---	None	---	None
29:									
Ardenmont	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
30:									
Ardenmont	B								
		Jan-Dec	---	---	---	---	None	---	None
31:									
Ardenmont	B								
		Jan-Dec	---	---	---	---	None	---	None
Swakane	D								
		Jan-Dec	---	---	---	---	None	---	None
32:									
Ardenvoir	B								
		Jan-Dec	---	---	---	---	None	---	None
33:									
Ardenvoir	B								
		Jan-Dec	---	---	---	---	None	---	None
34:									
Azwell	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
35:									
Bagmont	B								
		Jan-Dec	---	---	---	---	None	---	None
36:									
Bigcreek	B								
		Jan-Dec	---	---	---	---	None	---	None
37:									
Billyridge	B								
		Jan-Dec	---	---	---	---	None	---	None
38:									
Billyridge	B								
		Jan-Dec	---	---	---	---	None	---	None
39:									
Billyridge	B								
		Jan-Dec	---	---	---	---	None	---	None
40:									
Bisping	B								
		Jan-Dec	---	---	---	---	None	---	None
41:									
Bisping	B								
		Jan-Dec	---	---	---	---	None	---	None
42:									
Bisping	B								
		Jan-Dec	---	---	---	---	None	---	None
43:									
Bjork	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
44:									
Bjork	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
45:									
Blag	D								
		Jan-Dec	---	---	---	---	None	---	None
Cle Elum	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
46:									
Blag	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
47:									
Blewett	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
48:									
Borland	D								
		Jan-Dec	---	---	---	---	None	---	None
49:									
Borland	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
50:									
Brief	B								
		Jan-Dec	---	---	---	---	None	---	None
51:									
Brisky	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
52:									
Burch	B								
		Jan-Dec	---	---	---	---	None	---	None
53:									
Burnscreek	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table Upper limit	Water table Lower limit	Ponding Surface water depth	Ponding Duration	Ponding Frequency	Flooding Duration	Flooding Frequency
			Ft	*Ft*	*Ft*				
54:									
Burrant	B								
		Jan-Dec	---	---	---	---	None	---	None
55:									
Burrant	B								
		Jan-Dec	---	---	---	---	None	---	None
56:									
Cashmont	B								
		Jan-Dec	---	---	---	---	None	---	None
57:									
Cashmont	B								
		Jan-Dec	---	---	---	---	None	---	None
58:									
Chapot	B								
		Jan-Dec	---	---	---	---	None	---	None
59:									
Chinkmin	C								
		January	1.5-3.0	1.7-3.3	---	---	None	---	None
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	1.7-3.3	---	---	None	---	None
		May	1.5-3.0	1.7-3.3	---	---	None	---	None
		June	1.5-3.0	1.7-3.3	---	---	None	---	None
		July	1.5-3.0	1.7-3.3	---	---	None	---	None
		November	1.5-3.0	1.7-3.3	---	---	None	---	None
		December	1.5-3.0	1.7-3.3	---	---	None	---	None
60:									
Chinkmin	C								
		January	1.5-3.0	1.7-3.3	---	---	None	---	None
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	1.7-3.3	---	---	None	---	None
		May	1.5-3.0	1.7-3.3	---	---	None	---	None
		June	1.5-3.0	1.7-3.3	---	---	None	---	None
		July	1.5-3.0	1.7-3.3	---	---	None	---	None
		November	1.5-3.0	1.7-3.3	---	---	None	---	None
		December	1.5-3.0	1.7-3.3	---	---	None	---	None
61:									
Chinkmin	C								
		January	1.5-3.0	1.7-3.3	---	---	None	---	None
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	1.7-3.3	---	---	None	---	None
		May	1.5-3.0	1.7-3.3	---	---	None	---	None
		June	1.5-3.0	1.7-3.3	---	---	None	---	None
		July	1.5-3.0	1.7-3.3	---	---	None	---	None
		November	1.5-3.0	1.7-3.3	---	---	None	---	None
		December	1.5-3.0	1.7-3.3	---	---	None	---	None
Altapeak	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
62:									
Chinkmin	C								
		January	1.5-3.0	1.7-3.3	---	---	None	---	None
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	1.7-3.3	---	---	None	---	None
		May	1.5-3.0	1.7-3.3	---	---	None	---	None
		June	1.5-3.0	1.7-3.3	---	---	None	---	None
		July	1.5-3.0	1.7-3.3	---	---	None	---	None
		November	1.5-3.0	1.7-3.3	---	---	None	---	None
		December	1.5-3.0	1.7-3.3	---	---	None	---	None
Altapeak	B								
		Jan-Dec	---	---	---	---	None	---	None
63:									
Chiwaukum	B								
		Jan-Dec	---	---	---	---	None	---	None
64:									
Chiwaukum	B								
		Jan-Dec	---	---	---	---	None	---	None
65:									
Chiwaukum	B								
		Jan-Dec	---	---	---	---	None	---	None
66:									
Chiwaukum	B								
		Jan-Dec	---	---	---	---	None	---	None
67:									
Chiwaukum	B								
		Jan-Dec	---	---	---	---	None	---	None
Chiwaukum, south	B								
		Jan-Dec	---	---	---	---	None	---	None
68:									
Chiwaukum	B								
		Jan-Dec	---	---	---	---	None	---	None
Chiwaukum, south	B								
		Jan-Dec	---	---	---	---	None	---	None
69:									
Chiwawa	B								
		Jan-Dec	---	---	---	---	None	---	None
70:									
Choralmont, till substratum	A								
		Jan-Dec	---	---	---	---	None	---	None
Choralmont	A								
		Jan-Dec	---	---	---	---	None	---	None
71:									
Choralmont	A								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

			Water table		Ponding			Flooding	
Map symbol and soil name	Hydrologic group	Month	Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
72:									
Choralmont	A	Jan-Dec	---	---	---	---	None	---	None
73:									
Choralmont	A	Jan-Dec	---	---	---	---	None	---	None
74:									
Choralmont	A	Jan-Dec	---	---	---	---	None	---	None
75:									
Choralmont	A	Jan-Dec	---	---	---	---	None	---	None
Limking	B	Jan-Dec	---	---	---	---	None	---	None
76:									
Chumstick	D	Jan-Dec	---	---	---	---	None	---	None
77:									
Chumstick	D	Jan-Dec	---	---	---	---	None	---	None
78:									
Chumstick	D	Jan-Dec	---	---	---	---	None	---	None
79:									
Cle Elum	C	Jan-Dec	---	---	---	---	None	---	None
80:									
Cle Elum	C	Jan-Dec	---	---	---	---	None	---	None
81:									
Coopmont	B	Jan-Dec	---	---	---	---	None	---	None
82:									
Coopmont	B	Jan-Dec	---	---	---	---	None	---	None
83:									
Cowiche	B	Jan-Dec	---	---	---	---	None	---	None
Cowiche, very deep	B	Jan-Dec	---	---	---	---	None	---	None
84:									
Cowiche	B	Jan-Dec	---	---	---	---	None	---	None
Cowiche, very deep	B	Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
85:									
Cryomont	A								
		January	---	---	---	---	None	Brief	Frequent
		February	---	---	---	---	None	Brief	Frequent
		March	---	---	---	---	None	Brief	Frequent
		April	---	---	---	---	None	Brief	Frequent
		December	---	---	---	---	None	Brief	Frequent
86:									
Cryomont	A								
		March	---	---	---	---	None	---	Rare
		April	---	---	---	---	None	---	Rare
		May	---	---	---	---	None	---	Rare
		June	---	---	---	---	None	---	Rare
87:									
Cryomont	A								
		January	---	---	---	---	None	Brief	Frequent
		February	---	---	---	---	None	Brief	Frequent
		March	---	---	---	---	None	Brief	Frequent
		April	---	---	---	---	None	Brief	Frequent
		December	---	---	---	---	None	Brief	Frequent
Cryomont, fan	A								
		March	---	---	---	---	None	---	Rare
		April	---	---	---	---	None	---	Rare
		May	---	---	---	---	None	---	Rare
		June	---	---	---	---	None	---	Rare
88:									
Culving	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
89:									
Culvop	B								
		Jan-Dec	---	---	---	---	None	---	None
90:									
Devore	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
91:									
Dinkelman	B								
		Jan-Dec	---	---	---	---	None	---	None
92:									
Dinkelman	B								
		Jan-Dec	---	---	---	---	None	---	None
93:									
Dinkelman	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
94:									
Dinkels	B								
		Jan-Dec	---	---	---	---	None	---	None
95:									
Dinkels	B								
		Jan-Dec	---	---	---	---	None	---	None
96:									
Dinkels	B								
		Jan-Dec	---	---	---	---	None	---	None
97:									
Domkey	B								
		Jan-Dec	---	---	---	---	None	---	None
98:									
Domkey	B								
		Jan-Dec	---	---	---	---	None	---	None
99:									
Domkey	B								
		Jan-Dec	---	---	---	---	None	---	None
McCree	B								
		Jan-Dec	---	---	---	---	None	---	None
100:									
Dragoon	C								
		Jan-Dec	---	---	---	---	None	---	None
101:									
Dragoon	C								
		Jan-Dec	---	---	---	---	None	---	None
102:									
Entiat	D								
		Jan-Dec	---	---	---	---	None	---	None
103:									
Entiat	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
104:									
Entic Haplumbrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
105:									
Esmeralda	B								
		Jan-Dec	---	---	---	---	None	---	None
106:									
Esmeralda	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
107:									
Fears	B								
		Jan-Dec	---	---	---	---	None	---	None
108:									
Fears	B								
		Jan-Dec	---	---	---	---	None	---	None
Devore	B								
		Jan-Dec	---	---	---	---	None	---	None
109:									
Fernow	B								
		Jan-Dec	---	---	---	---	None	---	None
110:									
Fernow	B								
		Jan-Dec	---	---	---	---	None	---	None
111:									
Fernow	B								
		Jan-Dec	---	---	---	---	None	---	None
Serene	C								
		Jan-Dec	---	---	---	---	None	---	None
112:									
Fluvaquents	D								
		January	0.3-1.3	>6.0	---	---	None	Long	Frequent
		February	0.0-0.3	>6.0	0.0-0.5	Brief	None	Long	Frequent
		March	0.0-0.3	>6.0	0.0-0.5	Brief	None	Long	Frequent
		April	0.3-1.3	>6.0	---	---	None	---	None
		May	1.3-1.9	>6.0	---	---	None	---	None
		June	2.4-6.0	>6.0	---	---	None	---	None
		November	1.9-2.4	>6.0	---	---	None	Long	Frequent
		December	1.3-1.9	>6.0	---	---	None	Long	Frequent
113:									
Georgecreek	B								
		Jan-Dec	---	---	---	---	None	---	None
114:									
Georgecreek	B								
		Jan-Dec	---	---	---	---	None	---	None
115:									
Georgecreek	B								
		Jan-Dec	---	---	---	---	None	---	None
116:									
Georgecreek	B								
		Jan-Dec	---	---	---	---	None	---	None
Dragoon	C								
		Jan-Dec	---	---	---	---	None	---	None
117:									
Georgecreek	B								
		Jan-Dec	---	---	---	---	None	---	None
Dragoon	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
118:									
Gilpar--------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
119:									
Gilpar--------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Nimue---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
120:									
Gilpar--------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Nimue---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
121:									
Gilpar--------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
122:									
Glaciers, snowfields------	D								
		Jan-Dec	---	---	---	---	None	---	None
123:									
Goffpeak------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
124:									
Goffpeak------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Fears---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
125:									
Haplocryods, cold---------	B								
		Jan-Dec	---	---	---	---	None	---	None
Haplocryods, stony--------	B								
		Jan-Dec	---	---	---	---	None	---	None
126:									
Haplocryods---------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Andic Cryochrepts---------	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
127:									
Haploxerolls	B								
		Jan-Dec	---	---	---	---	None	---	None
128:									
Haploxerolls	B								
		Jan-Dec	---	---	---	---	None	---	None
129:									
Humicryods	B								
		Jan-Dec	---	---	---	---	None	---	None
Andic Cryumbrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
130:									
Humicryods	B								
		Jan-Dec	---	---	---	---	None	---	None
Andic Cryochrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
131:									
Humicryods	B								
		Jan-Dec	---	---	---	---	None	---	None
Andic Cryumbrepts	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
132:									
Hyprairie	C								
		Jan-Dec	---	---	---	---	None	---	None
133:									
Hyprairie	C								
		Jan-Dec	---	---	---	---	None	---	None
134:									
Hyprairie	C								
		Jan-Dec	---	---	---	---	None	---	None
Oldbutte	C								
		Jan-Dec	---	---	---	---	None	---	None
135:									
Icicle, south	B								
		Jan-Dec	---	---	---	---	None	---	None
Icicle	B								
		Jan-Dec	---	---	---	---	None	---	None
136:									
Icicle	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
137:									
Icicle	B								
		Jan-Dec	---	---	---	---	None	---	None
138:									
Icicle	B								
		Jan-Dec	---	---	---	---	None	---	None
139:									
Icicle	B								
		Jan-Dec	---	---	---	---	None	---	None
140:									
Icicle	B								
		Jan-Dec	---	---	---	---	None	---	None
Chumstick	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
141:									
Icicle	B								
		Jan-Dec	---	---	---	---	None	---	None
Chumstick	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
142:									
Inkler	B								
		Jan-Dec	---	---	---	---	None	---	None
143:									
Isella	B								
		Jan-Dec	---	---	---	---	None	---	None
Fernow	B								
		Jan-Dec	---	---	---	---	None	---	None
144:									
Isella	B								
		Jan-Dec	---	---	---	---	None	---	None
Fernow	B								
		Jan-Dec	---	---	---	---	None	---	None
145:									
Isella	B								
		Jan-Dec	---	---	---	---	None	---	None
Nimue	B								
		Jan-Dec	---	---	---	---	None	---	None
146:									
Isella	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
146:									
Nimue---------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
147:									
Kingmont------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
148:									
Kladnick------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
149:									
Kladnick------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
150:									
Kladnick------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
151:									
Klapatche-----------------	C								
		Jan-Dec	---	---	---	---	None	---	None
Altapeak------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
152:									
Kloochman-----------------	C								
		Jan-Dec	---	---	---	---	None	---	None
153:									
Kloochman-----------------	C								
		Jan-Dec	---	---	---	---	None	---	None
154:									
Kloochman-----------------	C								
		Jan-Dec	---	---	---	---	None	---	None
155:									
Kloochman-----------------	C								
		Jan-Dec	---	---	---	---	None	---	None
Inkler--------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
156:									
Kloochman-----------------	C								
		Jan-Dec	---	---	---	---	None	---	None
Inkler--------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
157:									
Kloochman-----------------	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
158:									
Limking	B								
		Jan-Dec	---	---	---	---	None	---	None
159:									
Limking	B								
		Jan-Dec	---	---	---	---	None	---	None
Coopmont	B								
		Jan-Dec	---	---	---	---	None	---	None
160:									
Limking	B								
		Jan-Dec	---	---	---	---	None	---	None
Coopmont	B								
		Jan-Dec	---	---	---	---	None	---	None
161:									
Limking	B								
		Jan-Dec	---	---	---	---	None	---	None
Coopmont	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
162:									
Limking	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
163:									
Line	B								
		Jan-Dec	---	---	---	---	None	---	None
164:									
Line	B								
		Jan-Dec	---	---	---	---	None	---	None
165:									
Line	B								
		Jan-Dec	---	---	---	---	None	---	None
166:									
Line	B								
		Jan-Dec	---	---	---	---	None	---	None
Vabbing	B								
		Jan-Dec	---	---	---	---	None	---	None
167:									
Loneridge	C								
		Jan-Dec	---	---	---	---	None	---	None
168:									
Loneridge	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
169:									
Loneridge	C								
		Jan-Dec	---	---	---	---	None	---	None
170:									
Macreeing	B								
		Jan-Dec	---	---	---	---	None	---	None
171:									
Macreeing	B								
		Jan-Dec	---	---	---	---	None	---	None
172:									
Macreeing	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
173:									
Mansonia	B								
		Jan-Dec	---	---	---	---	None	---	None
174:									
Mansonia	B								
		Jan-Dec	---	---	---	---	None	---	None
Swakane	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
175:									
Mansonia	B								
		Jan-Dec	---	---	---	---	None	---	None
Swakane	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
176:									
Marmont	B								
		Jan-Dec	---	---	---	---	None	---	None
177:									
Marmont	B								
		Jan-Dec	---	---	---	---	None	---	None
178:									
Marmont	B								
		Jan-Dec	---	---	---	---	None	---	None
179:									
McCree	B								
		Jan-Dec	---	---	---	---	None	---	None
180:									
McCree	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
181:									
McCree	B								
		Jan-Dec	---	---	---	---	None	---	None
182:									
McCree	B								
		Jan-Dec	---	---	---	---	None	---	None
Palmich	B								
		Jan-Dec	---	---	---	---	None	---	None
183:									
McCree	B								
		Jan-Dec	---	---	---	---	None	---	None
Palmont	A								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
184:									
McCree	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
185:									
Mippon	C								
		February	3.0-6.0	>6.0	---	---	None	Brief	Occasional
		March	3.0-6.0	>6.0	---	---	None	Brief	Occasional
		April	3.0-6.0	>6.0	---	---	None	Brief	Occasional
		May	---	---	---	---	None	Brief	Occasional
186:									
Mippon	C								
		February	3.0-6.0	>6.0	---	---	None	Brief	Frequent
		March	3.0-6.0	>6.0	---	---	None	Brief	Frequent
		April	3.0-6.0	>6.0	---	---	None	Brief	Frequent
		May	---	---	---	---	None	Brief	Frequent
187:									
Mippon	C								
		February	3.0-6.0	>6.0	---	---	None	---	None
		March	3.0-6.0	>6.0	---	---	None	Brief	Occasional
		April	3.0-6.0	>6.0	---	---	None	Brief	Occasional
		May	---	---	---	---	None	Brief	Occasional
188:									
Morical	C								
		Jan-Dec	---	---	---	---	None	---	None
189:									
Morical	C								
		Jan-Dec	---	---	---	---	None	---	None
190:									
Morical	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	*Ft*	*Ft*				
191:									
Morical	C								
		Jan-Dec	---	---	---	---	None	---	None
Dragoon	C								
		Jan-Dec	---	---	---	---	None	---	None
192:									
Morical	C								
		Jan-Dec	---	---	---	---	None	---	None
Dragoon	C								
		Jan-Dec	---	---	---	---	None	---	None
193:									
Morical	C								
		Jan-Dec	---	---	---	---	None	---	None
Dragoon	C								
		Jan-Dec	---	---	---	---	None	---	None
194:									
Morical	C								
		Jan-Dec	---	---	---	---	None	---	None
Dragoon	C								
		Jan-Dec	---	---	---	---	None	---	None
195:									
Mountaineer	C								
		Jan-Dec	---	---	---	---	None	---	None
196:									
Mountaineer	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
197:									
Mountaineer	C								
		Jan-Dec	---	---	---	---	None	---	None
Tillicum	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
198:									
Nahahum	B								
		Jan-Dec	---	---	---	---	None	---	None
199:									
Nahahum	B								
		Jan-Dec	---	---	---	---	None	---	None
Taneum	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
200:									
Nard	B								
		Jan-Dec	---	---	---	---	None	---	None
201:									
Nard	B								
		Jan-Dec	---	---	---	---	None	---	None
202:									
Nard	B								
		Jan-Dec	---	---	---	---	None	---	None
Blag	D								
		Jan-Dec	---	---	---	---	None	---	None
203:									
Nard	B								
		Jan-Dec	---	---	---	---	None	---	None
Brisky	D								
		Jan-Dec	---	---	---	---	None	---	None
204:									
Nardine	C								
		January	3.5-4.2	>6.0	---	---	None	---	None
		February	2.9-3.5	>6.0	---	---	None	---	None
		March	1.4-2.9	>6.0	---	---	None	---	None
		April	2.9-3.5	>6.0	---	---	None	---	None
		May	3.5-4.2	>6.0	---	---	None	---	None
		June	4.2-6.0	>6.0	---	---	None	---	None
205:									
Nardmont	B								
		Jan-Dec	---	---	---	---	None	---	None
206:									
Nardmont	B								
		Jan-Dec	---	---	---	---	None	---	None
207:									
Natapoc	B								
		Jan-Dec	---	---	---	---	None	---	None
208:									
Natapoc	B								
		Jan-Dec	---	---	---	---	None	---	None
209:									
Natapoc	B								
		Jan-Dec	---	---	---	---	None	---	None
Thow	B								
		Jan-Dec	---	---	---	---	None	---	None
210:									
Naxing	B								
		Jan-Dec	---	---	---	---	None	---	None
211:									
Naxing	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
212:									
Newbell	B								
		Jan-Dec	---	---	---	---	None	---	None
213:									
Nimue	B								
		Jan-Dec	---	---	---	---	None	---	None
214:									
Nimue	B								
		Jan-Dec	---	---	---	---	None	---	None
215:									
Nimue	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
216:									
Nimue	B								
		Jan-Dec	---	---	---	---	None	---	None
Nimue, dry	B								
		Jan-Dec	---	---	---	---	None	---	None
217:									
Nimue, dry	B								
		Jan-Dec	---	---	---	---	None	---	None
Nimue	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
218:									
Oldbutte	C								
		Jan-Dec	---	---	---	---	None	---	None
219:									
Oldbutte	C								
		Jan-Dec	---	---	---	---	None	---	None
220:									
Palmich	B								
		Jan-Dec	---	---	---	---	None	---	None
221:									
Palmich	B								
		Jan-Dec	---	---	---	---	None	---	None
222:									
Palmich	B								
		Jan-Dec	---	---	---	---	None	---	None
223:									
Palmich	B								
		Jan-Dec	---	---	---	---	None	---	None
McCree	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
224:									
Palmich-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
McCree--------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
225:									
Palmich-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
226:									
Palmont-------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
227:									
Palmont-------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
228:									
Palmont-------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
229:									
Palmont-------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
230:									
Ramparter-----------------	A								
		Jan-Dec	---	---	---	---	None	---	None
231:									
Ramparter-----------------	A								
		Jan-Dec	---	---	---	---	None	---	None
232:									
Ramparter-----------------	A								
		Jan-Dec	---	---	---	---	None	---	None
233:									
Ramparter-----------------	A								
		Jan-Dec	---	---	---	---	None	---	None
234:									
Ramparter-----------------	A								
		Jan-Dec	---	---	---	---	None	---	None
235:									
Ramparter-----------------	A								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
236:									
Ramparter	A								
		Jan-Dec	---	---	---	---	None	---	None
Wilma	C								
		Jan-Dec	---	---	---	---	None	---	None
237:									
Reggad	A								
		Jan-Dec	---	---	---	---	None	---	None
238:									
Reggad	A								
		Jan-Dec	---	---	---	---	None	---	None
Serene	C								
		Jan-Dec	---	---	---	---	None	---	None
239:									
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
240:									
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
Blewett	D								
		Jan-Dec	---	---	---	---	None	---	None
241:									
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
Borland	D								
		Jan-Dec	---	---	---	---	None	---	None
242:									
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
Chumstick	D								
		Jan-Dec	---	---	---	---	None	---	None
Icicle	B								
		Jan-Dec	---	---	---	---	None	---	None
243:									
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
Chumstick	D								
		Jan-Dec	---	---	---	---	None	---	None
Icicle	B								
		Jan-Dec	---	---	---	---	None	---	None
244:									
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	*Ft*	*Ft*				
244:									
Rubble land	D								
		Jan-Dec	---	---	---	---	None	---	None
Glaciers, snowfields	D								
		Jan-Dec	---	---	---	---	None	---	None
245:									
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
Rubble land	A								
		Jan-Dec	---	---	---	---	None	---	None
Serene	C								
		Jan-Dec	---	---	---	---	None	---	None
246:									
Rubble land	A								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
247:									
Safety	B								
		Jan-Dec	---	---	---	---	None	---	None
248:									
Safety	B								
		Jan-Dec	---	---	---	---	None	---	None
249:									
Safety	B								
		Jan-Dec	---	---	---	---	None	---	None
250:									
Safety	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
251:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
252:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
253:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
254:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
255:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
256:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
257:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
258:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
Saska, bouldery	B								
		Jan-Dec	---	---	---	---	None	---	None
259:									
Saska, south	B								
		Jan-Dec	---	---	---	---	None	---	None
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
260:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
Saska, bouldery	B								
		Jan-Dec	---	---	---	---	None	---	None
261:									
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
Saska, bouldery	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
262:									
Saska, south	B								
		Jan-Dec	---	---	---	---	None	---	None
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
263:									
Saydab	C								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
264:									
Scotties	B								
		Jan-Dec	---	---	---	---	None	---	None
265:									
Serene	C								
		Jan-Dec	---	---	---	---	None	---	None
266:									
Serene	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
267:									
Serpen	C								
		Jan-Dec	---	---	---	---	None	---	None
268:									
Serpen	C								
		Jan-Dec	---	---	---	---	None	---	None
269:									
Shadypass	A								
		Jan-Dec	---	---	---	---	None	---	None
270:									
Shamel	B								
		Jan-Dec	---	---	---	---	None	---	None
271:									
Shamel	B								
		Jan-Dec	---	---	---	---	None	---	None
272:									
Shamel	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
273:									
Shaser	B								
		Jan-Dec	---	---	---	---	None	---	None
Blewett	D								
		Jan-Dec	---	---	---	---	None	---	None
274:									
Shaser	B								
		Jan-Dec	---	---	---	---	None	---	None
Brisky	D								
		Jan-Dec	---	---	---	---	None	---	None
275:									
Shaser	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
275:									
Chapot	B								
		Jan-Dec	---	---	---	---	None	---	None
276:									
Skipeak	B								
		Jan-Dec	---	---	---	---	None	---	None
277:									
Skipeak	B								
		Jan-Dec	---	---	---	---	None	---	None
Line	B								
		Jan-Dec	---	---	---	---	None	---	None
278:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None
279:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None
280:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None
281:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None
282:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None
283:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
284:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
285:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None
Soda, cold	B								
		Jan-Dec	---	---	---	---	None	---	None
286:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	*Ft*	*Ft*				
286:									
Soda, cold	B								
		Jan-Dec	---	---	---	---	None	---	None
287:									
Soda	B								
		Jan-Dec	---	---	---	---	None	---	None
Soda, cold	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
288:									
Sodacreek	B								
		January	4.0-6.0	>6.0	---	---	None	---	None
		February	4.0-6.0	>6.0	---	---	None	---	None
		March	4.0-6.0	>6.0	---	---	None	---	None
		April	4.0-6.0	>6.0	---	---	None	---	None
		May	4.0-6.0	>6.0	---	---	None	---	None
		June	4.0-6.0	>6.0	---	---	None	---	None
		July	4.0-6.0	>6.0	---	---	None	---	None
		August	4.0-6.0	>6.0	---	---	None	---	None
		September	4.0-6.0	>6.0	---	---	None	---	None
		October	4.0-6.0	>6.0	---	---	None	---	None
		November	4.0-6.0	>6.0	---	---	None	---	None
		December	4.0-6.0	>6.0	---	---	None	---	None
289:									
Sodacreek	B								
		January	4.0-6.0	>6.0	---	---	None	---	None
		February	4.0-6.0	>6.0	---	---	None	---	None
		March	4.0-6.0	>6.0	---	---	None	---	None
		April	4.0-6.0	>6.0	---	---	None	---	None
		May	4.0-6.0	>6.0	---	---	None	---	None
		June	4.0-6.0	>6.0	---	---	None	---	None
		July	4.0-6.0	>6.0	---	---	None	---	None
		August	4.0-6.0	>6.0	---	---	None	---	None
		September	4.0-6.0	>6.0	---	---	None	---	None
		October	4.0-6.0	>6.0	---	---	None	---	None
		November	4.0-6.0	>6.0	---	---	None	---	None
		December	4.0-6.0	>6.0	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
290:									
Spodic Vitrixerands	B								
		January	3.2-6.0	>6.0	---	---	None	---	None
		February	2.1-3.2	>6.0	---	---	None	---	None
		March	0.6-1.4	>6.0	---	---	None	---	None
		April	0.3-0.6	>6.0	---	---	None	---	None
		May	0.3-0.6	>6.0	---	---	None	---	None
		June	1.4-2.1	>6.0	---	---	None	---	None
		July	2.1-3.2	>6.0	---	---	None	---	None
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
291:									
Spodic Vitrixerands	B								
		January	3.2-6.0	>6.0	---	---	None	---	None
		February	2.1-3.2	>6.0	---	---	None	---	None
		March	0.6-1.4	>6.0	---	---	None	---	None
		April	0.3-0.6	>6.0	---	---	None	---	None
		May	0.3-0.6	>6.0	---	---	None	---	None
		June	1.4-2.1	>6.0	---	---	None	---	None
		July	2.1-3.2	>6.0	---	---	None	---	None
Saska	B								
		Jan-Dec	---	---	---	---	None	---	None
292:									
Stemilt	B								
		Jan-Dec	---	---	---	---	None	---	None
293:									
Stemilt	B								
		Jan-Dec	---	---	---	---	None	---	None
294:									
Surgh	B								
		Jan-Dec	---	---	---	---	None	---	None
295:									
Surgh	B								
		Jan-Dec	---	---	---	---	None	---	None
296:									
Surgh	B								
		Jan-Dec	---	---	---	---	None	---	None
297:									
Surgh	B								
		Jan-Dec	---	---	---	---	None	---	None
Wedge	A								
		Jan-Dec	---	---	---	---	None	---	None
298:									
Swakane	D								
		Jan-Dec	---	---	---	---	None	---	None
299:									
Swakane	D								
		Jan-Dec	---	---	---	---	None	---	None
300:									
Swakane	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
301:									
Swakane	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
302:									
Switchback	C								
		Jan-Dec	---	---	---	---	None	---	None
303:									
Switchback	C								
		Jan-Dec	---	---	---	---	None	---	None
304:									
Switchback	C								
		Jan-Dec	---	---	---	---	None	---	None
305:									
Taneum	C								
		Jan-Dec	---	---	---	---	None	---	None
306:									
Thow	B								
		Jan-Dec	---	---	---	---	None	---	None
307:									
Thow	B								
		Jan-Dec	---	---	---	---	None	---	None
308:									
Thow	B								
		Jan-Dec	---	---	---	---	None	---	None
309:									
Thow	B								
		Jan-Dec	---	---	---	---	None	---	None
Domkey	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
310:									
Thowson	B								
		Jan-Dec	---	---	---	---	None	---	None
311:									
Thowson	B								
		Jan-Dec	---	---	---	---	None	---	None
312:									
Thowson	B								
		Jan-Dec	---	---	---	---	None	---	None
313:									
Thowson	B								
		Jan-Dec	---	---	---	---	None	---	None
314:									
Thowson	B								
		Jan-Dec	---	---	---	---	None	---	None
315:									
Thowson	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
315:									
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
316:									
Thowson	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
317:									
Thowson	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
318:									
Thowson, stony	B								
		Jan-Dec	---	---	---	---	None	---	None
Thowson	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
319:									
Tillicum	B								
		Jan-Dec	---	---	---	---	None	---	None
320:									
Tillicum	B								
		Jan-Dec	---	---	---	---	None	---	None
321:									
Tillicum	B								
		Jan-Dec	---	---	---	---	None	---	None
322:									
Tillmont	B								
		Jan-Dec	---	---	---	---	None	---	None
323:									
Tillmont	B								
		Jan-Dec	---	---	---	---	None	---	None
324:									
Tillmont	B								
		Jan-Dec	---	---	---	---	None	---	None
Inkler	B								
		Jan-Dec	---	---	---	---	None	---	None
325:									
Tiptop	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
326:									
Tiptop	B								
		Jan-Dec	---	---	---	---	None	---	None
Naxing	B								
		Jan-Dec	---	---	---	---	None	---	None
327:									
Totem	B								
		Jan-Dec	---	---	---	---	None	---	None
328:									
Totem	B								
		Jan-Dec	---	---	---	---	None	---	None
329:									
Totem	B								
		Jan-Dec	---	---	---	---	None	---	None
330:									
Totem	B								
		Jan-Dec	---	---	---	---	None	---	None
Chiwaukum	B								
		Jan-Dec	---	---	---	---	None	---	None
331:									
Treen	D								
		Jan-Dec	---	---	---	---	None	---	None
332:									
Treen	D								
		Jan-Dec	---	---	---	---	None	---	None
Klapatche	C								
		Jan-Dec	---	---	---	---	None	---	None
333:									
Tronsen	C								
		Jan-Dec	---	---	---	---	None	---	None
334:									
Tronsen	C								
		Jan-Dec	---	---	---	---	None	---	None
335:									
Tyee	D								
		Jan-Dec	---	---	---	---	None	---	None
336:									
Tyee	D								
		Jan-Dec	---	---	---	---	None	---	None
337:									
Tyee	D								
		Jan-Dec	---	---	---	---	None	---	None
338:									
Tyee	D								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
338:									
Bisping	B								
		Jan-Dec	---	---	---	---	None	---	None
339:									
Typic Cryaquands	D								
		March	2.0-6.0	>6.0	---	---	None	---	None
		April	1.2-2.0	>6.0	---	---	None	---	None
		May	0.8-1.2	>6.0	---	---	None	---	None
		June	0.8-1.2	>6.0	---	---	None	---	None
		July	1.2-2.0	>6.0	---	---	None	---	None
		August	2.0-6.0	>6.0	---	---	None	---	None
340:									
Vabbing	B								
		Jan-Dec	---	---	---	---	None	---	None
341:									
Vabbing	B								
		Jan-Dec	---	---	---	---	None	---	None
342:									
Vabbing	B								
		Jan-Dec	---	---	---	---	None	---	None
Gilpar	B								
		Jan-Dec	---	---	---	---	None	---	None
343:									
Vabbing	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
344:									
Vabus	C								
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	1.7-3.3	---	---	None	---	None
345:									
Vabus	C								
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	1.7-3.3	---	---	None	---	None
346:									
Vabus	C								
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.3	1.7-3.3	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
346:									
Chinkmin------------------	C								
		January	1.5-3.0	1.7-3.3	---	---	None	---	None
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	1.7-3.3	---	---	None	---	None
		May	1.5-3.0	1.7-3.3	---	---	None	---	None
		June	1.5-3.0	1.7-3.3	---	---	None	---	None
		July	1.5-3.0	1.7-3.3	---	---	None	---	None
		November	1.5-3.0	1.7-3.3	---	---	None	---	None
		December	1.5-3.0	1.7-3.3	---	---	None	---	None
347:									
Vabus---------------------	C								
		February	1.5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.3	1.7-3.3	---	---	None	---	None
Chinkmin------------------	C								
		January	1.5-3.0	1.7-3.3	---	---	None	---	None
		February	1,5-3.0	1.7-3.3	---	---	None	---	None
		March	1.5-3.0	1.7-3.3	---	---	None	---	None
		April	1.5-3.0	1.7-3.3	---	---	None	---	None
		May	1.5-3.0	1.7-3.3	---	---	None	---	None
		June	1.5-3.0	1.7-3.3	---	---	None	---	None
		July	1.5-3.0	1.7-3.3	---	---	None	---	None
		November	1.5-3.0	1.7-3.3	---	---	None	---	None
		December	1.5-3.0	1.7-3.3	---	---	None	---	None
348:									
Varelum-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
349:									
Varelum-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
350:									
Varelum-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
351:									
Varelum-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
352:									
Vitricryands--------------	B								
		Jan-Dec	---	---	---	---	None	---	None
353:									
Vitricryands--------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
354:									
Wagberg-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
355:									
Wagberg-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
356:									
Wagberg-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Wagberg, south------------	B								
		Jan-Dec	---	---	---	---	None	---	None
357:									
Wagberg-------------------	B								
		Jan-Dec	---	---	---	---	None	---	None
Swakane-------------------	D								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop--------------	D								
		Jan-Dec	---	---	---	---	None	---	None
358:									
Wedge---------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
359:									
Wedge---------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
360:									
Wedge---------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
361:									
Wedge---------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
362:									
Wedge---------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
Typic Cryaquands----------	D								
		March	2.0-6.0	>6.0	---	---	None	---	None
		April	1.2-2.0	>6.0	---	---	None	---	None
		May	0.8-1.2	>6.0	---	---	None	---	None
		June	0.8-1.2	>6.0	---	---	None	---	None
		July	1.2-2.0	>6.0	---	---	None	---	None
		August	2.0-6.0	>6.0	---	---	None	---	None
363:									
Wedge---------------------	A								
		Jan-Dec	---	---	---	---	None	---	None
Wedge, cold---------------	A								
		Jan-Dec	---	---	---	---	None	---	None
364:									
Wedgemont-----------------	B								
		Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

			Water table		Ponding			Flooding	
Map symbol and soil name	Hydro-logic group	Month	Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
365:									
Wilma	C								
		Jan-Dec	---	---	---	---	None	---	None
366:									
Wilma	C								
		Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D								
		Jan-Dec	---	---	---	---	None	---	None
367:									
Yaxing	B								
		Jan-Dec	---	---	---	---	None	---	None
368:									
Yaxing	B								
		Jan-Dec	---	---	---	---	None	---	None
369:									
Yaxon	B								
		Jan-Dec	---	---	---	---	None	---	None
370:									
Yaxon	B								
		Jan-Dec	---	---	---	---	None	---	None
371:									
Yaxon	B								
		Jan-Dec	---	---	---	---	None	---	None
372:									
Yaxon	B								
		Jan-Dec	---	---	---	---	None	---	None
373:									
Yaxon	B								
		Jan-Dec	---	---	---	---	None	---	None
374:									
Zeb	B								
		Jan-Dec	---	---	---	---	None	---	None
W:									
Water	---								
		Jan-Dec	---	---	---	---	None	---	None

Table 19.--Classification of the Soils

Soil name	Family or higher taxonomic class
Aeric Fluvaquents	Aeric Fluvaquents
Almac	Ashy over loamy, mixed Xeric Vitricryands
Alnult	Medial-skeletal Typic Haplocryands
Altapeak	Sandy-skeletal, mixed Andic Haplocryods
Anatone	Loamy-skeletal, mixed, frigid Lithic Haploxerolls
Andic Cryochrepts	Andic Cryochrepts
Andic Cryumbrepts	Andic Cryumbrepts
Andic Haplumbrepts	Andic Haplumbrepts
Angle	Mixed, frigid Alfic Xeropsamments
Aquic Cryumprepts	Aquic Cryumbrepts
Ardening	Coarse-loamy, mixed, mesic Ultic Haploxerolls
Ardenmont	Sandy, mixed, frigid Typic Xerochrepts
Ardenvoir	Loamy-skeletal, mixed, frigid Typic Xerochrepts
Azwell	Ashy-skeletal Xeric Vitricryands
Bagmont	Ashy-skeletal Xeric Vitricryands
Bigcreek	Ashy over pumiceous or cindery, frigid Typic Vitrixerands
Billyridge	Coarse-loamy, mixed, mesic Ultic Haploxerolls
Bisping	Ashy over loamy, mixed, mesic Mollic Vitrixerands
Bjork	Fine-loamy, mixed, mesic Aridic Argixerolls
Blag	Loamy, mixed, mesic Lithic Xerochrepts
Blewett	Loamy-skeletal, mixed, frigid Lithic Ultic Haploxerolls
Borland	Loamy, mixed, mesic Lithic Argixerolls
Brief	Coarse-loamy, mixed, mesic Typic Haploxerolls
Brisky	Loamy-skeletal, mixed, mesic Lithic Ultic Haploxerolls
Burch	Coarse-loamy, mixed, mesic Aridic Haploxerolls
Burnscreek	Loamy-skeletal, mixed, mesic Ultic Haploxerolls
Burrant	Coarse-loamy, mixed, mesic Ultic Haploxerolls
Cashmont	Coarse-loamy, mixed, mesic Aridic Haploxerolls
Chapot	Loamy-skeletal, mixed, frigid Ultic Haploxeralfs
Chinkmin	Medial-skeletal Andic Duricryods
Chiwaukum	Medial over loamy-skeletal, mixed Andic Haplocryods
Chiwawa	Ashy, frigid Typic Vitrixerands
Choralmont	Ashy-pumiceous, frigid Typic Vitrixerands
Chumstick	Loamy-skeletal, mixed, frigid Lithic Ultic Haploxerolls
Cle Elum	Fine-loamy, mixed, mesic Ultic Haploxeralfs
Coopmont	Ashy over loamy-skeletal, mixed Xeric Vitricryands
Cowiche	Fine-loamy, mixed, mesic Aridic Argixerolls
Cryomont	Sandy-skeletal, mixed Typic Cryorthents
Culving	Loamy-skeletal, serpentinitic, frigid Dystric Xerochrepts
Culvop	Ashy-skeletal Lithic Vitricryands
Devore	Loamy-skeletal, mixed Andic Cryochrepts
Dinkelman	Coarse-loamy, mixed, frigid Vitrandic Haploxerolls
Dinkels	Coarse-loamy, mixed, mesic Typic Haploxerolls
Domkey	Ashy over sandy or sandy-skeletal, mixed, frigid Typic Vitrixerands
Dragoon	Fine-loamy, mixed, mesic Ultic Argixerolls
Entiat	Loamy-skeletal, mixed, mesic, shallow Aridic Haploxerolls
Entic Haplumbrepts	Entic Haplumbrepts
Esmeralda	Medial-skeletal Typic Vitricryands
Fears	Ashy-skeletal Xeric Vitricryands
Fernow	Medial over pumiceous or cindery Andic Haplocryods
Fluvaquents	Fluvaquents
Georgecreek	Fine-loamy, mixed, mesic Vitrandic Argixerolls
Gilpar	Medial-skeletal Andic Haplocryods
Goffpeak	Ashy Xeric Vitricryands
Haplocryods	Haplocryods
Haploxerolls	Haploxerolls
Humicryods	Humicryods
Hyprairie	Fine-loamy, mixed, mesic Pachic Ultic Argixerolls
Icicle	Loamy-skeletal, mixed, frigid Dystric Xerochrepts
Inkler	Loamy-skeletal, mixed, frigid Andic Xerochrepts
Isella	Medial Andic Humicryods
Kingmont	Clayey-skeletal, serpentinitic, frigid Typic Palexeralfs
Kladnick	Sandy-skeletal, mixed, frigid Andic Xerochrepts
Klapatche	Sandy-skeletal, mixed Andic Humicryods

Table 19.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Kloochman	Loamy-skeletal, mixed, frigid Andic Xerochrepts
Limking	Ashy over sandy or sandy-skeletal, mixed, frigid Typic Vitrixerands
Line	Ashy over sandy or sandy-skeletal, mixed Typic Vitricryands
Loneridge	Clayey-skeletal, mixed, frigid Vitrandic Palexeralfs
Macreeing	Loamy-skeletal, mixed, mesic Vitrandic Xerochrepts
Mansonia	Ashy, mesic Vitrandic Haploxerolls
Marmont	Cindery over sandy or sandy-skeletal, mixed, mesic Vitrandic Haploxerolls
McCree	Loamy-skeletal, mixed, frigid Andic Xerochrepts
Mippon	Sandy-skeletal, mixed, frigid Fluventic Haploxerolls
Morical	Fine-loamy, mixed, mesic Vitrandic Argixerolls
Mountaineer	Loamy-skeletal, mixed, frigid Andic Xerumbrepts
Nahahum	Fine-loamy, mixed, frigid Vitrandic Haploxeralfs
Nard	Fine-loamy, mixed, frigid Ultic Haploxeralfs
Nardine	Fine, mixed, frigid Ultic Haploxeralfs
Nardmont	Fine-loamy, mixed, frigid Vitrandic Haploxeralfs
Natapoc	Ashy over loamy-skeletal, mixed, frigid Typic Vitrixerands
Naxing	Ashy-skeletal Xeric Vitricryands
Newbell	Loamy-skeletal, mixed, frigid Andic Xerochrepts
Nimue	Loamy-skeletal, mixed Andic Haplocryods
Oldbutte	Fine-loamy, mixed, frigid Pachic Ultic Argixerolls
Palmich	Ashy-pumiceous, frigid Typic Vitrixerands
Palmont	Sandy-skeletal, mixed, frigid Andic Xerochrepts
Ramparter	Ashy-pumiceous, frigid Typic Vitrixerands
Reggad	Dysic Typic Cryofolists
Safety	Coarse-loamy, mixed, mesic Vitrandic Haploxerolls
Saska	Ashy over loamy-skeletal, mixed, frigid Typic Vitrixerands
Saydab	Ashy-skeletal Xeric Vitricryands
Scotties	Loamy-skeletal, mixed, frigid Andic Xerochrepts
Serene	Sandy-skeletal, mixed Andic Haplocryods
Serpen	Loamy-skeletal, serpentinitic, frigid Typic Argixerolls
Shadypass	Pumiceous Xeric Vitricryands
Shamel	Coarse-loamy, mixed, frigid Ultic Haploxerolls
Shaser	Ashy over loamy-skeletal, mixed, frigid Alfic Vitrixerands
Skipeak	Sandy-skeletal, mixed Andic Haplocryods
Soda	Medial over loamy-skeletal, mixed Andic Haplocryods
Sodacreek	Medial over loamy-skeletal, micaceous Typic Vitricryands
Spodic Vitrixerands	Spodic Vitrixerands
Stemilt	Loamy-skeletal, mixed, frigid Vitrandic Argixerolls
Surgh	Loamy-skeletal, mixed Andic Cryochrepts
Swakane	Loamy-skeletal, mixed, mesic Lithic Ultic Haploxerolls
Switchback	Coarse-loamy, mixed, frigid Vitrandic Xerochrepts
Taneum	Fine-loamy, mixed, mesic Typic Argixerolls
Thow	Ashy, frigid Typic Vitrixerands
Thowson	Ashy, mesic Typic Vitrixerands
Tillicum	Ashy over loamy, mixed, frigid Typic Vitrixerands
Tillmont	Pumiceous or ashy-pumiceous over medial-skeletal, frigid Typic Vitrixerands
Tiptop	Ashy-skeletal Xeric Vitricryands
Totem	Medial over pumiceous or cindery Andic Haplocryods
Treen	Medial Lithic Haplocryands
Tronsen	Clayey-skeletal, mixed, mesic Typic Palexerolls
Tyee	Loamy, mixed, mesic, shallow Vitrandic Haploxerolls
Typic Cryaquands	Typic Cryaquands
Vabbing	Pumiceous or ashy-pumiceous over medial-skeletal Andic Haplocryods
Vabus	Medial-skeletal Andic Haplocryods
Varelum	Fine-loamy, mixed, mesic Ultic Haploxeralfs
Vitricryands	Vitricryands
Wagberg	Loamy-skeletal, mixed, mesic Vitrandic Haploxerolls
Wedge	Ashy-pumiceous Xeric Vitricryands
Wedgemont	Pumiceous or ashy-pumiceous over loamy, mixed Xeric Vitricryands
Wilma	Loamy-skeletal, mixed, frigid Andic Xerochrepts
Yaxing	Fine-loamy, mixed, mesic Pachic Ultic Argixerolls
Yaxon	Fine-loamy, mixed, mesic Pachic Argixerolls
Zeb	Loamy-skeletal, mixed, frigid Ultic Haploxerolls

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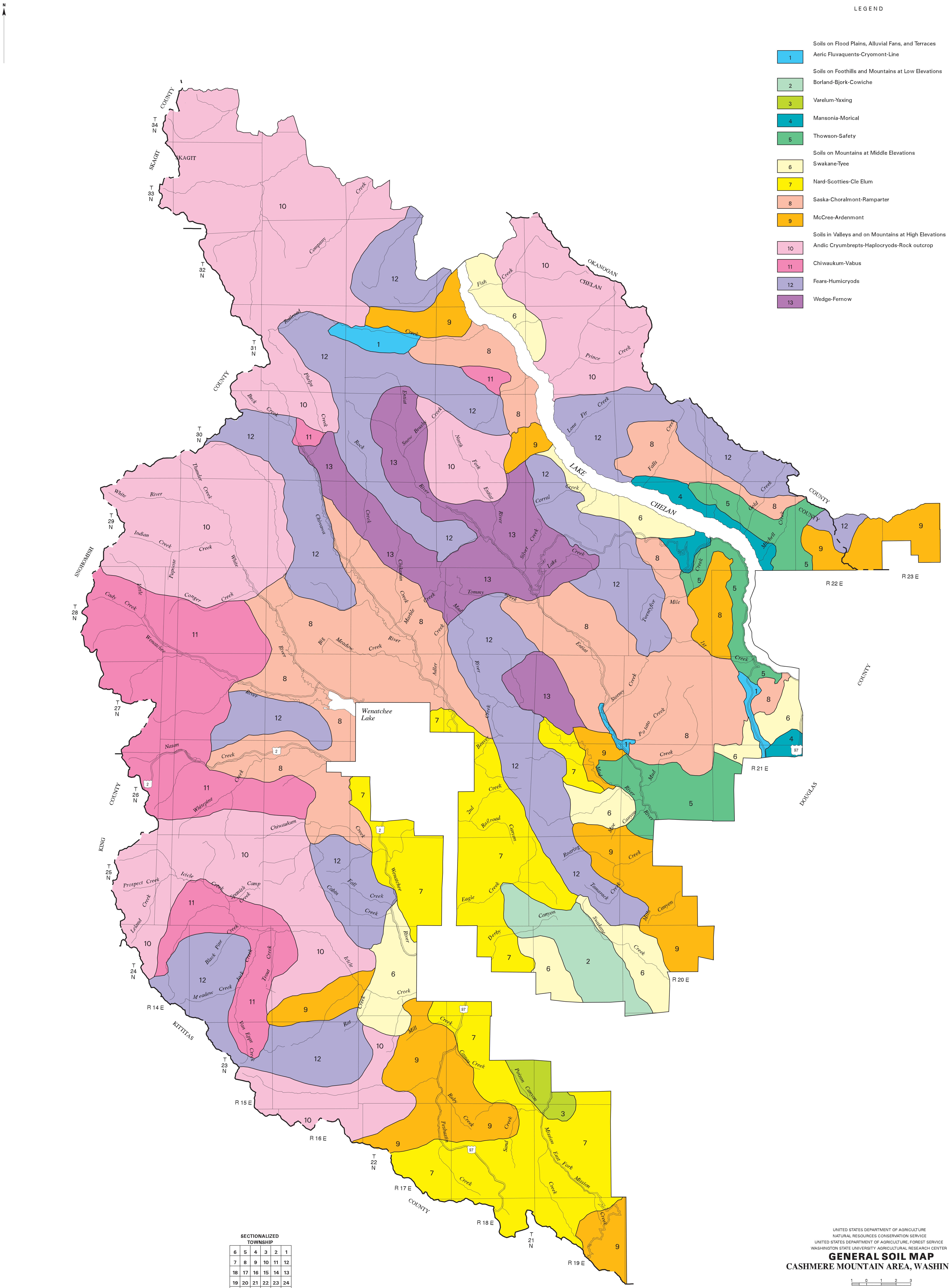


LEGEND

	Soils on Flood Plains, Alluvial Fans, and Terraces
1	Aeric Fluvaquents-Cryomont-Line
	Soils on Foothills and Mountains at Low Elevations
2	Borland-Bjork-Cowiche
3	Varelum-Yaxing
4	Mansonia-Morical
5	Thowson-Safety
	Soils on Mountains at Middle Elevations
6	Swakane-Tyee
7	Nard-Scotties-Cle Elum
8	Saska-Choralmont-Ramparter
9	McCree-Ardenmont
	Soils in Valleys and on Mountains at High Elevations
10	Andic Cryumbrepts-Haplocryods-Rock outcrop
11	Chiwaukum-Vabus
12	Fears-Humicryods
13	Wedge-Fernow

SECTIONALIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.

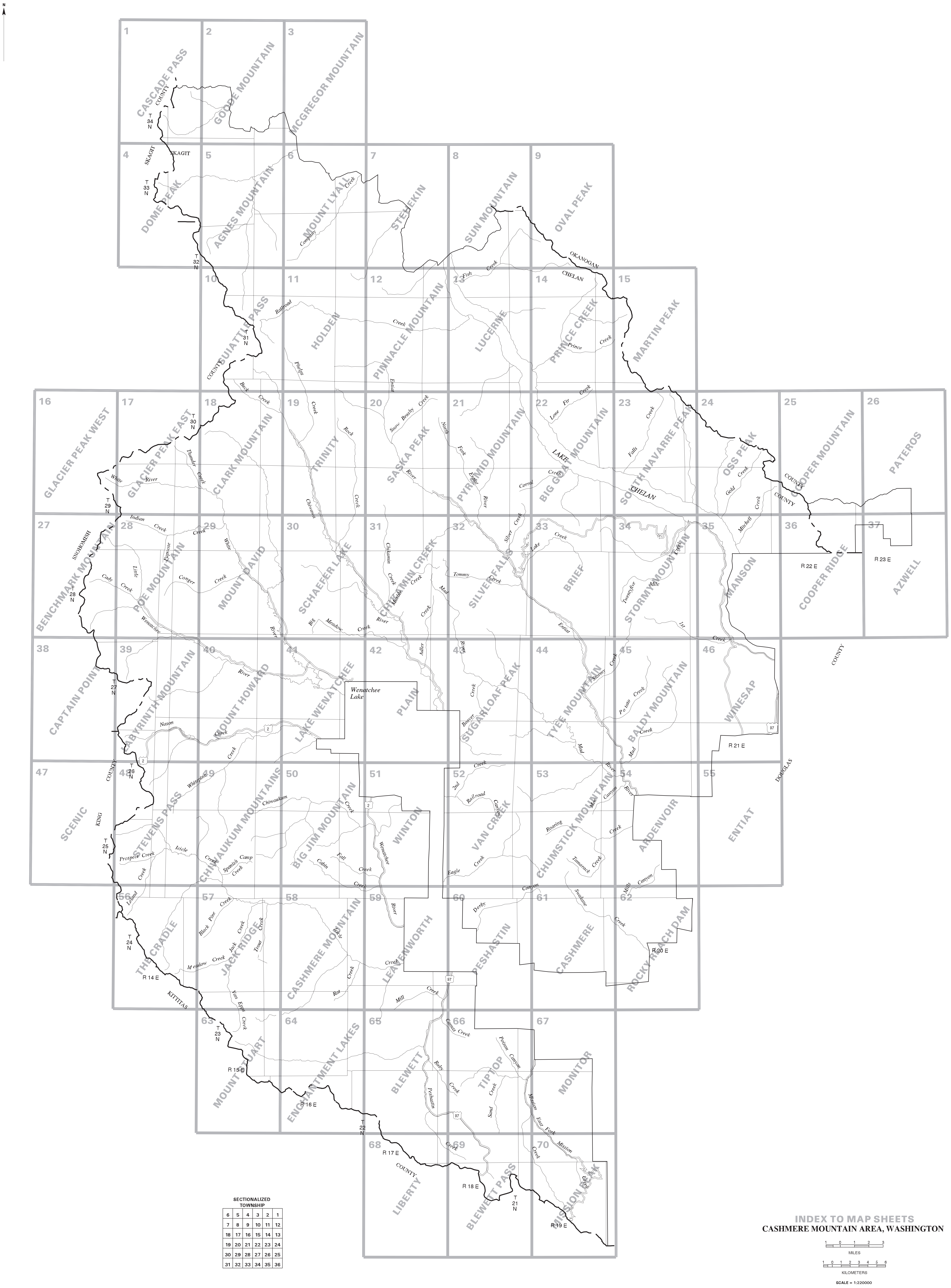
UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE
WASHINGTON STATE UNIVERSITY AGRICULTURAL RESEARCH CENTER

GENERAL SOIL MAP
CASHMERE MOUNTAIN AREA, WASHINGTON

1 0 1 2 3
MILES

1 0 1 2 3 4 5 6
KILOMETERS

SCALE = 1:220000



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CASHMERE MOUNTAIN AREA, WASHINGTON

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

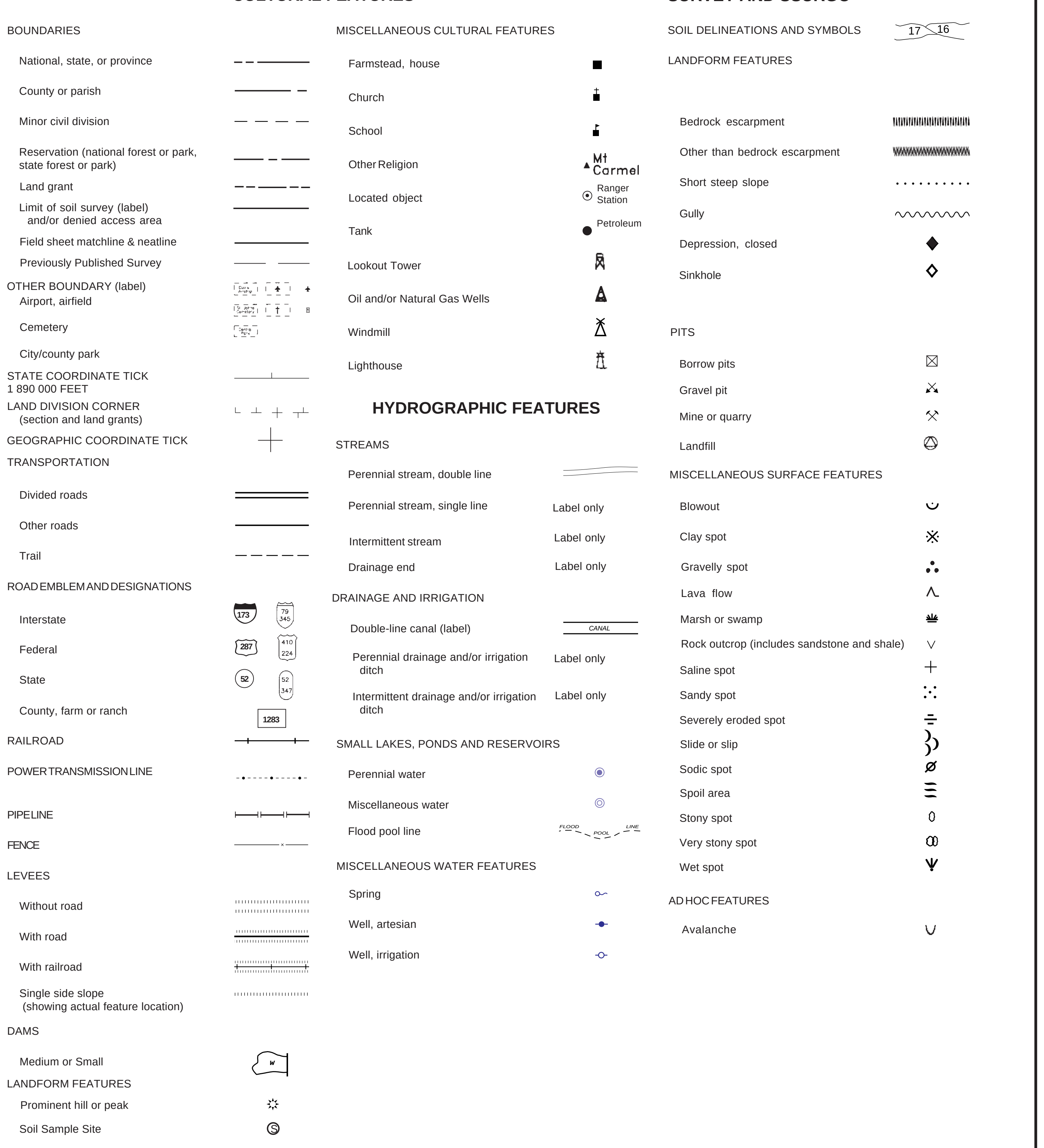
CASHMERE MOUNTAIN AREA, WASHINGTON, PARTS OF CHELAN AND OKANOGAN COUNTIES

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE
WASHINGTON STATE UNIVERSITY AGRICULTURAL RESEARCH CENTER

SOIL LEGEND

SYMBOL	NAME
1	Aeric Fluvaquents, nearly level
2	Almac fine sandy loam, 3 to 30 percent slopes
3	Almac fine sandy loam, 30 to 60 percent slopes
4	Almac fine sandy loam, moist, 30 to 60 percent slopes
5	Almac-Azwell association, 30 to 60 percent slopes
6	Almac-Azwell-Rock outcrop association, 45 to 90 percent slopes
7	Almac-Rock outcrop complex, 45 to 90 percent slopes
8	Alnult-Reggad complex, 45 to 90 percent slopes
9	Altapeak gravelly sandy loam, 3 to 30 percent slopes
10	Altapeak gravelly sandy loam, 30 to 60 percent slopes
11	Altapeak gravelly sandy loam, 60 to 90 percent slopes
12	Altapeak gravelly sandy loam, warm, 30 to 60 percent slopes
13	Altapeak-Alnult association, 30 to 60 percent slopes
14	Altapeak-Alnult association, 60 to 90 percent slopes
15	Altapeak, warm-Alnult association, 30 to 60 percent slopes
16	Anatone-Blewett complex, 30 to 60 percent slopes
17	Anatone-Rock outcrop complex, 30 to 60 percent slopes
18	Andic Cryochrepts, very steep
19	Andic Cryumbrepts, deep, steep
20	Andic Cryumbrepts, steep
21	Andic Cryumbrepts-Haplocryods-Rock outcrop complex, steep and very steep
22	Andic Cryumbrepts-Rock outcrop complex, steep and very steep
23	Andic Cryumbrepts, moist-Rock outcrop complex, steep and very steep
24	Andic Haplumbrepts-Rock outcrop complex, very steep
25	Angle stony loamy sand, 60 to 90 percent slopes
26	Aquic Cryumbrepts, nearly level to gently sloping
27	Ardening stony loam, 30 to 60 percent slopes
28	Ardenmont coarse sandy loam, 8 to 30 percent slopes
29	Ardenmont coarse sandy loam, 30 to 60 percent slopes
30	Ardenmont coarse sandy loam, 60 to 90 percent slopes
31	Ardenmont-Swakane complex, 60 to 90 percent slopes
32	Ardenvoir stony fine sandy loam, 30 to 60 percent slopes
33	Ardenvoir stony fine sandy loam, 60 to 90 percent slopes
34	Azwell-Rock outcrop complex, 30 to 60 percent slopes
35	Bagmont gravelly loam, 40 to 90 percent slopes
36	Bigcreek cindery sandy loam, 0 to 8 percent slopes
37	Billyridge gravelly sandy loam, 0 to 8 percent slopes
38	Billyridge gravelly sandy loam, 8 to 15 percent slopes
39	Billyridge gravelly sandy loam, 15 to 25 percent slopes
40	Bisping fine sandy loam, 3 to 15 percent slopes
41	Bisping fine sandy loam, 15 to 30 percent slopes
42	Bisping fine sandy loam, 30 to 60 percent slopes
43	Bjork loam, 30 to 65 percent slopes
44	Bjork-Rock outcrop complex, 25 to 75 percent slopes
45	Blag-Cle Elum-Rock outcrop complex, 30 to 75 percent slopes
46	Blag-Rock outcrop complex, 30 to 80 percent slopes
47	Blewett-Rock outcrop complex, 30 to 60 percent slopes
48	Borland loam, 30 to 60 percent slopes
49	Borland-Rock outcrop complex, 30 to 60 percent slopes
50	Brief gravelly sandy loam, 0 to 15 percent slopes
51	Brisky-Rock outcrop complex, 30 to 60 percent slopes
52	Burch loam, 3 to 8 percent slopes
53	Burnscreek stony sandy loam, 3 to 30 percent slopes
54	Burrant loam, 3 to 8 percent slopes
55	Burrant loam, 8 to 25 percent slopes
56	Cashmont sandy loam, 0 to 8 percent slopes
57	Cashmont gravelly sandy loam, 8 to 25 percent slopes
58	Chapot extremely bouldery loam, 30 to 60 percent slopes
59	Chinkmin bouldery fine sandy loam, 3 to 30 percent slopes
60	Chinkmin bouldery fine sandy loam, 30 to 60 percent slopes
61	Chinkmin-Altapeak association, 3 to 30 percent slopes
62	Chinkmin-Altapeak association, 30 to 60 percent slopes
63	Chiwaukum stony sandy loam, 3 to 30 percent slopes
64	Chiwaukum bouldery fine sandy loam, 30 to 60 percent slopes
65	Chiwaukum bouldery fine sandy loam, 3 to 30 percent south slopes
66	Chiwaukum very bouldery fine sandy loam, 8 to 30 percent slopes
67	Chiwaukum association, 3 to 30 percent slopes
68	Chiwaukum association, 30 to 60 percent slopes
69	Chiwawa cindery fine sandy loam, 0 to 3 percent slopes
70	Choralmont association, 30 to 60 percent slopes
71	Choralmont cindery sandy loam, 3 to 30 percent slopes
72	Choralmont cindery sandy loam, 30 to 60 percent slopes
73	Choralmont cindery sandy loam, till substratum, 3 to 30 percent slopes
74	Choralmont cindery sandy loam, till substratum, 30 to 60 percent slopes
75	Choralmont-Limking complex, 30 to 60 percent slopes
76	Chumstick stony sandy loam, 3 to 30 percent slopes
77	Chumstick stony sandy loam, 30 to 60 percent slopes
78	Chumstick stony sandy loam, 60 to 90 percent slopes
79	Cle Elum loam, 30 to 60 percent slopes
80	Cle Elum loam, 30 to 60 percent south slopes
81	Coopmont fine sandy loam, 3 to 30 percent slopes
82	Coopmont fine sandy loam, 30 to 60 percent slopes
83	Cowiche complex, 3 to 25 percent slopes
84	Cowiche complex, 25 to 70 percent slopes
85	Cryomont stony fine sandy loam, 0 to 5 percent slopes
86	Cryomont stony fine sandy loam, 5 to 30 percent slopes
87	Cryomont association, 0 to 30 percent slopes
88	Culving-Rock outcrop complex, 30 to 60 percent slopes
89	Culvop very gravelly loam, 30 to 60 percent slopes
90	Devore-Rock outcrop complex, 50 to 75 percent slopes
91	Dinkelman gravelly sandy loam, 30 to 60 percent slopes
92	Dinkelman gravelly sandy loam, 60 to 90 percent slopes
93	Dinkelman-Rock outcrop complex, 30 to 90 percent slopes
94	Dinkels fine sandy loam, 8 to 15 percent slopes
95	Dinkels fine sandy loam, 15 to 30 percent slopes
96	Dinkels gravelly sandy loam, 45 to 70 percent slopes
97	Domkey sandy loam, 5 to 30 percent slopes
98	Domkey sandy loam, 30 to 60 percent slopes
99	Domkey-McCree complex, 30 to 60 percent slopes
100	Dragoon fine sandy loam, 30 to 60 percent slopes
101	Dragoon loam, 30 to 60 percent slopes
102	Entiat gravelly fine sandy loam, 30 to 75 percent slopes
103	Entiat-Rock outcrop complex, 30 to 75 percent slopes
104	Entic Haplumbrepts, 30 to 75 percent slopes
105	Esmeralda bouldery sandy loam, 30 to 60 percent slopes
106	Esmeralda-Rock outcrop complex, 30 to 75 percent slopes
107	Fears stony fine sandy loam, 30 to 60 percent slopes
108	Fears-Devore association, 30 to 60 percent slopes
109	Fernow loam, 3 to 30 percent slopes
110	Fernow loam, 30 to 60 percent slopes
111	Fernow-Serene association, 30 to 60 percent slopes
112	Fluvaquents, nearly level
113	Georgecreek fine sandy loam, 3 to 15 percent slopes
114	Georgecreek fine sandy loam, 15 to 30 percent slopes
115	Georgecreek fine sandy loam, 30 to 60 percent slopes
116	Georgecreek-Dragoon complex, 3 to 15 percent slopes
117	Georgecreek-Dragoon complex, 15 to 30 percent slopes
118	Gilpar very stony sandy loam, 30 to 60 percent slopes
119	Gilpar-Nimue association, 30 to 60 percent slopes
120	Gilpar-Nimue-Rock outcrop association, 45 to 90 percent slopes
121	Gilpar-Rock outcrop complex, 45 to 90 percent slopes
122	Glaciers, snowfields
123	Goffpeak cindery sandy loam, 30 to 60 percent slopes
124	Goffpeak-Fears association, 30 to 60 percent slopes
125	Haplocryods complex, gently sloping to steep
126	Haplocryods-Andic Cryochrepts-Rock outcrop complex, steep and very steep
127	Haploxerolls, moderately steep
128	Haploxerolls, very steep
129	Humicryods-Andic Cryumbrepts complex, gently sloping to moderately steep
130	Humicryods-Andic Cryochrepts-Rock outcrop complex, steep and very steep
131	Humicryods-Andic Cryumbrepts-Rock outcrop complex, steep and very steep
132	Hyprairie silt loam, 25 to 45 percent slopes
133	Hyprairie silt loam, 45 to 65 percent slopes
134	Hyprairie-Oldbutte complex, 45 to 65 percent slopes
135	Icicle association, 30 to 60 percent slopes
136	Icicle bouldery sandy loam, 30 to 60 percent slopes
137	Icicle very bouldery sandy loam, 3 to 30 percent slopes
138	Icicle very bouldery sandy loam, 30 to 75 percent slopes
139	Icicle stony fine sandy loam, 30 to 60 percent slopes
140	Icicle-Chumstick-Rock outcrop association, 45 to 90 percent slopes
141	Icicle-Chumstick-Rock outcrop complex, 45 to 90 percent slopes
142	Inkler stony fine sandy loam, 30 to 60 percent slopes
143	Isella-Fernow association, 3 to 30 percent slopes
144	Isella-Fernow association, 30 to 60 percent slopes
145	Isella-Nimue association, 3 to 30 percent slopes
146	Isella-Nimue association, 30 to 60 percent slopes
147	Kingmont gravelly loam, 30 to 60 percent slopes
148	Kladnick cobbly fine sandy loam, 0 to 8 percent slopes
149	Kladnick gravelly fine sandy loam, 3 to 30 percent slopes
150	Kladnick very stony sandy loam, 3 to 15 percent slopes
151	Klapatche-Altapeak association, 30 to 60 percent slopes
152	Kloochman gravelly fine sandy loam, 3 to 30 percent slopes
153	Kloochman gravelly fine sandy loam, 30 to 60 percent slopes
154	Kloochman gravelly fine sandy loam, 60 to 90 percent slopes
155	Kloochman-Inkler association, 30 to 60 percent slopes
156	Kloochman-Inkler-Rock outcrop association, 45 to 75 percent slopes
157	Kloochman-Rock outcrop complex, 45 to 75 percent slopes
158	Limking stony loam, 30 to 60 percent slopes
159	Limking-Coopmont association, 30 to 60 percent slopes
160	Limking-Coopmont complex, 30 to 60 percent slopes
161	Limking-Coopmont-Rock outcrop association, 30 to 60 percent slopes
162	Limking-Rock outcrop complex, 30 to 60 percent slopes
163	Line cindery fine sandy loam, 3 to 30 percent slopes
164	Line gravelly fine sandy loam, 3 to 30 percent slopes
165	Line stony fine sandy loam, 30 to 60 percent slopes
166	Line-Vabbing association, 3 to 30 percent slopes
167	Loneridge stony loam, 3 to 30 percent slopes
168	Loneridge stony loam, 3 to 30 percent north slopes
169	Loneridge very stony loam, 30 to 60 percent slopes
170	Macreeing stony fine sandy loam, 30 to 60 percent slopes
171	Macreeing stony fine sandy loam, 60 to 90 percent slopes
172	Macreeing-Rock outcrop complex, 45 to 90 percent slopes
173	Mansonia fine sandy loam, 30 to 60 percent slopes
174	Mansonia-Swakane-Rock outcrop complex, 8 to 45 percent slopes
175	Mansonia-Swakane-Rock outcrop complex, 45 to 90 percent slopes
176	Marmont cindery fine sandy loam, 3 to 15 percent slopes
177	Marmont cindery fine sandy loam, 15 to 30 percent slopes
178	Marmont cindery fine sandy loam, 30 to 75 percent slopes
179	McCree stony fine sandy loam, 8 to 30 percent slopes
180	McCree stony fine sandy loam, 30 to 60 percent slopes
181	McCree stony fine sandy loam, 60 to 90 percent slopes
182	McCree-Palmich complex, 30 to 60 percent slopes
183	McCree-Palmont-Rock outcrop association, 45 to 90 percent slopes
184	McCree-Rock outcrop complex, 45 to 90 percent slopes
185	Mippon gravelly fine sandy loam, 0 to 3 percent slopes
186	Mippon very gravelly loamy fine sand, 0 to 3 percent slopes
187	Mippon very bouldery loamy sand, 0 to 3 percent slopes
188	Morical fine sandy loam, 3 to 15 percent slopes
189	Morical fine sandy loam, 15 to 30 percent slopes
190	Morical fine sandy loam, 30 to 60 percent slopes
191	Morical-Dragoon complex, 30 to 60 percent slopes
192	Morical-Dragoon fine sandy loams, 3 to 30 percent slopes
193	Morical-Dragoon fine sandy loams, 30 to 60 percent slopes
194	Morical-Dragoon fine sandy loams, 60 to 90 percent slopes
195	Mountaineer stony sandy loam, 30 to 60 percent slopes
196	Mountaineer-Rock outcrop complex, 45 to 90 percent slopes
197	Mountaineer-Tillicum-Rock outcrop association, 45 to 90 percent slopes
198	Nahahum loam, 30 to 60 percent slopes
199	Nahahum-Taneum complex, 30 to 60 percent slopes
200	Nard sandy loam, 3 to 30 percent slopes
201	Nard sandy loam, 30 to 60 percent slopes
202	Nard-Blag complex, 30 to 60 percent slopes
203	Nard-Brisky complex, 30 to 60 percent slopes
204	Nardine loam, 0 to 8 percent slopes
205	Nardmont loam, 3 to 30 percent slopes
206	Nardmont loam, 30 to 60 percent slopes
207	Natapoc stony sandy loam, 3 to 30 percent slopes
208	Natapoc stony sandy loam, 30 to 60 percent slopes
209	Natapoc-Thow association, 30 to 60 percent slopes
210	Naxing very stony loam, 5 to 30 percent slopes
211	Naxing very stony loam, 30 to 60 percent slopes
212	Newbell bouldery sandy loam, 30 to 60 percent slopes
213	Nimue bouldery sandy loam, 60 to 90 percent slopes
214	Nimue cobbly fine sandy loam, 30 to 60 percent slopes
215	Nimue-Rock outcrop complex, 45 to 90 percent slopes
216	Nimue association, 30 to 60 percent slopes
217	Nimue-Rock outcrop association, 45 to 90 percent slopes
218	Oldbutte silt loam, 3 to 8 percent slopes
219	Oldbutte silt loam, 45 to 65 percent slopes
220	Palmich cindery sandy loam, 15 to 30 percent slopes
221	Palmich cindery sandy loam, 30 to 60 percent slopes
222	Palmich cindery sandy loam, 60 to 90 percent slopes
223	Palmich-McCree association, 30 to 60 percent slopes
224	Palmich-McCree-Rock outcrop association, 30 to 60 percent slopes
225	Palmich-Rock outcrop complex, 30 to 60 percent slopes
226	Palmont cobbly fine sandy loam, 30 to 60 percent slopes
227	Palmont cobbly fine sandy loam, 60 to 90 percent slopes
228	Palmont very stony fine sandy loam, 30 to 60 percent slopes
229	Palmont-Rock outcrop complex, 45 to 90 percent slopes
230	Ramparter stony sandy loam, 30 to 60 percent slopes
231	Ramparter stony sandy loam, till substratum, 5 to 30 percent slopes
232	Ramparter stony sandy loam, till substratum, 30 to 60 percent slopes
233	Ramparter stony sandy loam, till substratum, 60 to 90 percent slopes
234	Ramparter very fine sandy loam, 5 to 30 percent slopes
235	Ramparter very fine sandy loam, 30 to 60 percent slopes
236	Ramparter-Wilma complex, 30 to 60 percent slopes
237	Reggad extremely stony muck, 45 to 90 percent slopes
238	Reggad-Serene association, 45 to 90 percent slopes
239	Rock outcrop
240	Rock outcrop-Blewett complex, 30 to 60 percent slopes
241	Rock outcrop-Borland complex, 45 to 90 percent slopes
242	Rock outcrop-Chumstick-Icicle complex, 45 to 90 percent slopes
243	Rock outcrop-Chumstick-Icicle association, 45 to 90 percent slopes
244	Rock outcrop-Rubble land-Glaciers, snowfields complex
245	Rock outcrop-Rubble land-Serene complex, 45 to 90 percent slopes
246	Rubble land-Rock outcrop complex
247	Safety stony sandy loam, 8 to 30 percent slopes
248	Safety stony sandy loam, 30 to 60 percent slopes
249	Safety stony sandy loam, 60 to 90 percent slopes
250	Safety-Rock outcrop complex, 30 to 60 percent slopes
251	Saska stony sandy loam, 3 to 30 percent slopes
252	Saska stony sandy loam, 30 to 60 percent slopes
253	Saska bouldery sandy loam, 3 to 30 percent slopes
254	Saska bouldery sandy loam, 30 to 60 percent slopes
255	Saska very bouldery sandy loam, 3 to 30 percent slopes
256	Saska very bouldery sandy loam, 30 to 60 percent slopes
257	Saska-Rock outcrop complex, 30 to 60 percent slopes
258	Saska association, 3 to 30 percent slopes
259	Saska association, 3 to 30 percent south slopes
260	Saska association, 30 to 60 percent slopes
261	Saska-Rock outcrop association, 30 to 60 percent slopes
262	Saska, south-Rock outcrop association, 30 to 60 percent slopes
263	Saydab extremely stony loam, 3 to 30 percent slopes
264	Scotties gravelly loam, 30 to 60 percent slopes
265	Serene gravelly sandy loam, 30 to 60 percent slopes
266	Serene-Rock outcrop complex, 45 to 90 percent slopes
267	Serpen very gravelly loam, 15 to 30 percent slopes
268	Serpen very gravelly loam, 30 to 60 percent slopes
269	Shadypass very cindery sandy loam, 30 to 60 percent slopes
270	Shamel sandy loam, 30 to 60 percent slopes
271	Shamel sandy loam, 60 to 90 percent slopes
272	Shamel-Rock outcrop complex, 40 to 90 percent slopes
273	Shaser-Blewett complex, 30 to 60 percent slopes
274	Shaser-Brisky complex, 30 to 60 percent slopes
275	Shaser-Chapot complex, 30 to 60 percent slopes
276	Skipeak gravelly sandy loam, 5 to 30 percent slopes
277	Skipeak-Line association, 5 to 30 percent slopes
278	Soda stony sandy loam, 8 to 30 percent slopes
279	Soda bouldery sandy loam, 30 to 60 percent slopes
280	Soda very bouldery sandy loam, 30 to 60 percent slopes
281	Soda bouldery fine sandy loam, 3 to 30 percent slopes
282	Soda bouldery fine sandy loam, 30 to 60 percent slopes
283	Soda-Rock outcrop complex, 45 to 90 percent slopes
284	Soda, cold-Rock outcrop complex, 30 to 60 percent slopes
285	Soda association, 8 to 30 percent slopes
286	Soda association, 30 to 60 percent slopes
287	Soda-Rock outcrop association, 30 to 60 percent slopes
288	Sodacreek bouldery fine sandy loam, 25 to 45 percent slopes
289	Sodacreek-Rock outcrop complex, 45 to 90 percent slopes
290	Spodic Vitrixerands-Saska complex, 3 to 30 percent slopes
291	Spodic Vitrixerands-Saska complex, 30 to 60 percent slopes
292	Stemilt stony loam, 3 to 30 percent slopes
293	Stemilt stony loam, 30 to 60 percent slopes
294	Surgh fine sandy loam, 3 to 30 percent slopes
295	Surgh fine sandy loam, 30 to 60 percent slopes
296	Surgh fine sandy loam, 60 to 90 percent slopes
297	Surgh-Wedge complex, 8 to 30 percent slopes
298	Swakane stony sandy loam, 30 to 60 percent slopes
299	Swakane stony sandy loam, 60 to 90 percent slopes
300	Swakane, granitic substratum-Rock outcrop complex, 40 to 90 percent slopes
301	Swakane-Rock outcrop complex, 45 to 90 percent slopes
302	Switchback gravelly fine sandy loam, 3 to 30 percent slopes
303	Switchback gravelly fine sandy loam, 30 to 60 percent slopes
304	Switchback gravelly fine sandy loam, 60 to 90 percent slopes
305	Taneum loam, 30 to 60 percent slopes
306	Thow cindery fine sandy loam, 8 to 30 percent slopes
307	Thow cindery fine sandy loam, 30 to 60 percent slopes
308	Thow cindery fine sandy loam, 60 to 90 percent slopes
309	Thow-Domkey-Rock outcrop complex, 30 to 60 percent slopes
310	Thowson fine sandy loam, 0 to 8 percent slopes
311	Thowson fine sandy loam, 8 to 15 percent slopes
312	Thowson fine sandy loam, 15 to 30 percent slopes
313	Thowson fine sandy loam, 30 to 60 percent slopes
314	Thowson stony fine sandy loam, 30 to 60 percent slopes
315	Thowson-Rock outcrop complex, 8 to 30 percent slopes
316	Thowson-Rock outcrop complex, 30 to 60 percent slopes
317	Thowson-Rock outcrop complex, 60 to 90 percent slopes
318	Thowson-Rock outcrop association, 30 to 60 percent slopes
319	Tillicum sandy loam, 30 to 60 percent slopes
320	Tillicum fine sandy loam, 8 to 30 percent slopes
321	Tillicum fine sandy loam, 30 to 60 percent slopes
322	Tillmont cindery sandy loam, 8 to 30 percent slopes
323	Tillmont cindery sandy loam, 30 to 60 percent slopes
324	Tillmont-Inkler association, 30 to 60 percent slopes
325	Tiptop very gravelly loam, 30 to 60 percent slopes
326	Tiptop-Naxing association, 30 to 60 percent slopes
327	Totem sandy loam, 5 to 30 percent slopes
328	Totem sandy loam, 30 to 60 percent slopes
329	Totem sandy loam, 60 to 90 percent slopes
330	Totem-Chiwaukum association, 30 to 60 percent slopes
331	Treen fine sandy loam, 45 to 90 percent slopes
332	Treen-Klapatche association, 45 to 90 percent slopes
333	Tronsen stony silt loam, 8 to 30 percent slopes
334	Tronsen stony silt loam, 30 to 60 percent slopes
335	Tyee gravelly loamy coarse sand, 30 to 90 percent slopes
336	Tyee gravelly sandy loam, 3 to 30 percent slopes
337	Tyee gravelly sandy loam, 30 to 90 percent slopes
338	Tyee-Bisping complex, 30 to 60 percent slopes
339	Typic Cryaquands, nearly level to gently sloping
340	Vabbing bouldery sandy loam, 3 to 30 percent slopes
341	Vabbing bouldery sandy loam, 30 to 60 percent slopes
342	Vabbing-Gilpar association, 30 to 60 percent slopes
343	Vabbing-Rock outcrop complex, 45 to 90 percent slopes
344	Vabus gravelly fine sandy loam, 3 to 30 percent slopes
345	Vabus gravelly fine sandy loam, 30 to 60 percent slopes
346	Vabus-Chinkmin association, 3 to 30 percent slopes
347	Vabus-Chinkmin association, 30 to 60 percent slopes
348	Varelum loam, 3 to 8 percent slopes
349	Varelum loam, 8 to 15 percent slopes
350	Varelum loam, 15 to 30 percent slopes
351	Varelum loam, 30 to 60 percent slopes
352	Vitricryands, steep and very steep
353	Vitricryands-Rock outcrop complex, steep and very steep
354	Wagberg stony fine sandy loam, 5 to 30 percent slopes
355	Wagberg stony fine sandy loam, 30 to 60 percent slopes
356	Wagberg complex, 25 to 70 percent slopes
357	Wagberg-Swakane-Rock outcrop complex, 45 to 90 percent slopes
358	Wedge cindery sandy loam, 8 to 30 percent slopes
359	Wedge cindery sandy loam, 30 to 60 percent slopes
360	Wedge cindery fine sandy loam, 8 to 30 percent slopes
361	Wedge cindery fine sandy loam, 30 to 60 percent slopes
362	Wedge-Typic Cryaquands complex, 0 to 15 percent slopes
363	Wedge association, 30 to 60 percent slopes
364	Wedgemont very cindery fine sandy loam, 30 to 60 percent slopes
365	Wilma stony fine sandy loam, 30 to 60 percent slopes
366	Wilma-Rock outcrop complex, 30 to 60 percent slopes
367	Yaxing loam, 8 to 15 percent slopes
368	Yaxing loam, 30 to 60 percent slopes
369	Yaxon silt loam, 8 to 15 percent slopes
370	Yaxon silt loam, 15 to 30 percent slopes
371	Yaxon silt loam, 30 to 45 percemt slopes
372	Yaxon silt loam, 45 to 65 percent slopes
373	Yaxon silt loam, 45 to 65 percent north slopes
374	Zeb stony sandy loam, 3 to 30 percent slopes
W	Water

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND



CULTURAL FEATURES

BOUNDARIES
- National, state, or province
- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park)
- Land grant
- Limit of soil survey (label) and/or denied access area
- Field sheet matchline & neatline
- Previously Published Survey

OTHER BOUNDARY (label)
- Airport, airfield
- Cemetery
- City/county park

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNER
(section and land grants)

GEOGRAPHIC COORDINATE TICK

TRANSPORTATION
- Divided roads
- Other roads
- Trail

ROAD EMBLEM AND DESIGNATIONS
- Interstate
- Federal
- State
- County, farm or ranch

RAILROAD

POWER TRANSMISSION LINE

PIPE LINE

FENCE

LEVEES
- Without road
- With road
- With railroad
- Single side slope (showing actual feature location)

DAMS
- Medium or Small

LANDFORM FEATURES
- Prominent hill or peak
- Soil Sample Site

MISCELLANEOUS CULTURAL FEATURES
- Farmstead, house
- Church
- School
- Other Religion
- Located object
- Tank
- Lookout Tower
- Oil and/or Natural Gas Wells
- Windmill
- Lighthouse

HYDROGRAPHIC FEATURES

STREAMS
- Perennial stream, double line
- Perennial stream, single line — Label only
- Intermittent stream — Label only
- Drainage end — Label only

DRAINAGE AND IRRIGATION
- Double-line canal (label)
- Perennial drainage and/or irrigation ditch — Label only
- Intermittent drainage and/or irrigation ditch — Label only

SMALL LAKES, PONDS AND RESERVOIRS
- Perennial water
- Miscellaneous water
- Flood pool line

MISCELLANEOUS WATER FEATURES
- Spring
- Well, artesian
- Well, irrigation

SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS

LANDFORM FEATURES
- Bedrock escarpment
- Other than bedrock escarpment
- Short steep slope
- Gully
- Depression, closed
- Sinkhole

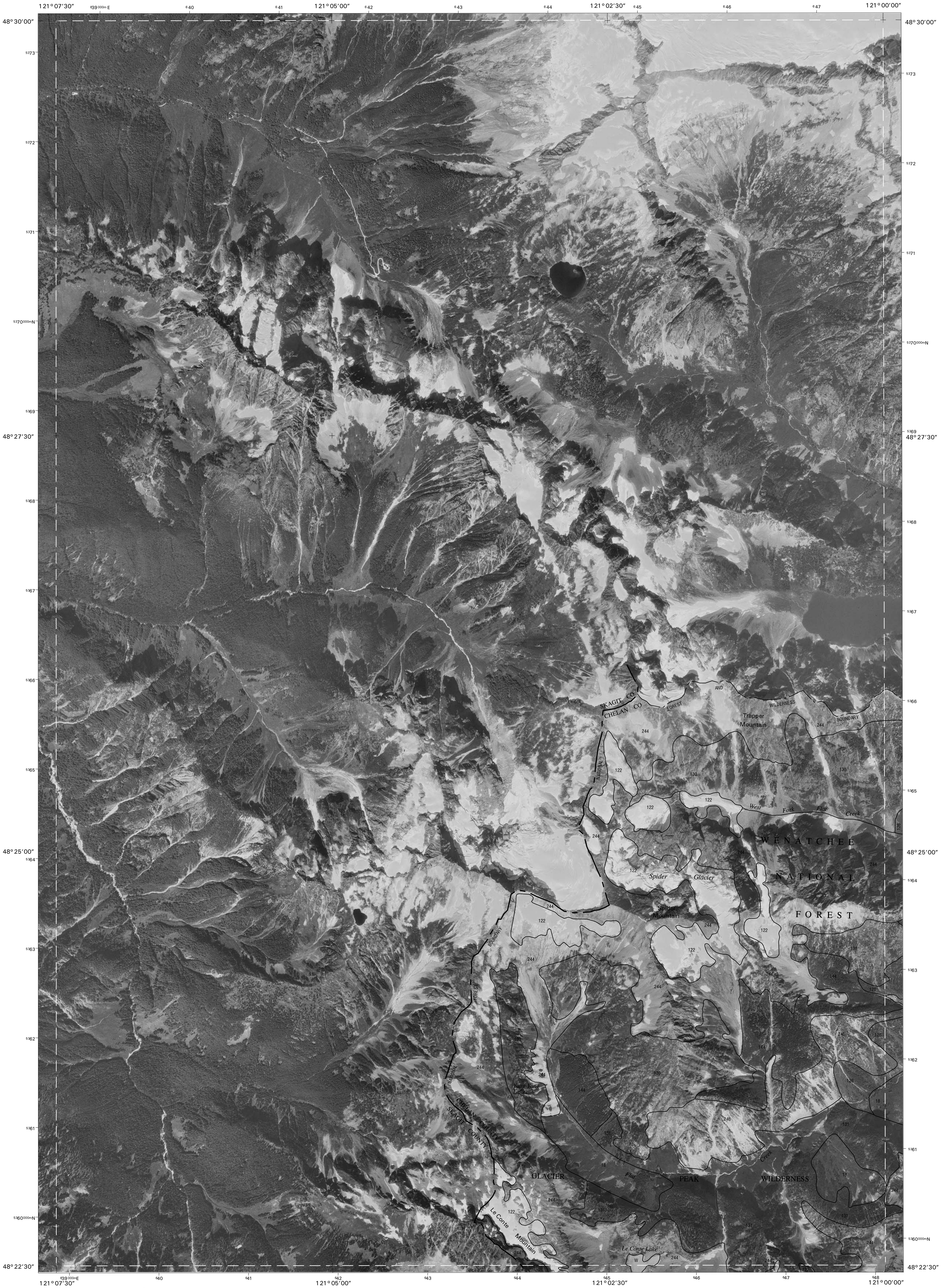
PITS
- Borrow pits
- Gravel pit
- Mine or quarry
- Landfill

MISCELLANEOUS SURFACE FEATURES
- Blowout
- Clay spot
- Gravelly spot
- Lava flow
- Marsh or swamp
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip
- Sodic spot
- Spoil area
- Stony spot
- Very stony spot
- Wet spot

AD HOC FEATURES
- Avalanche

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
CASCADE PASS QUADRANGLE
SHEET NUMBER 1 OF 70



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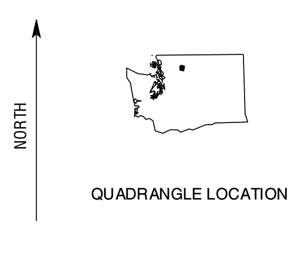
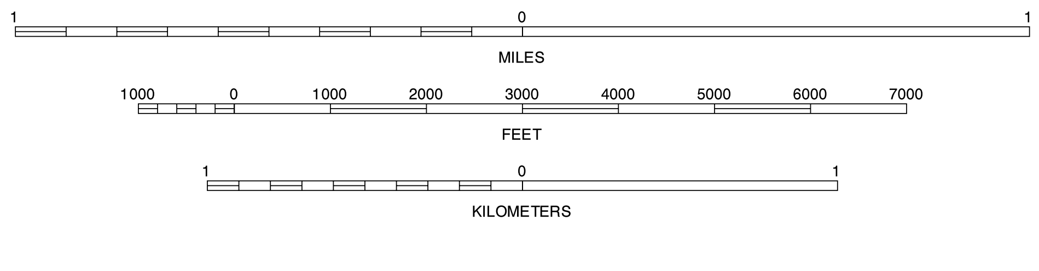
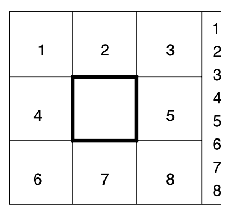
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000





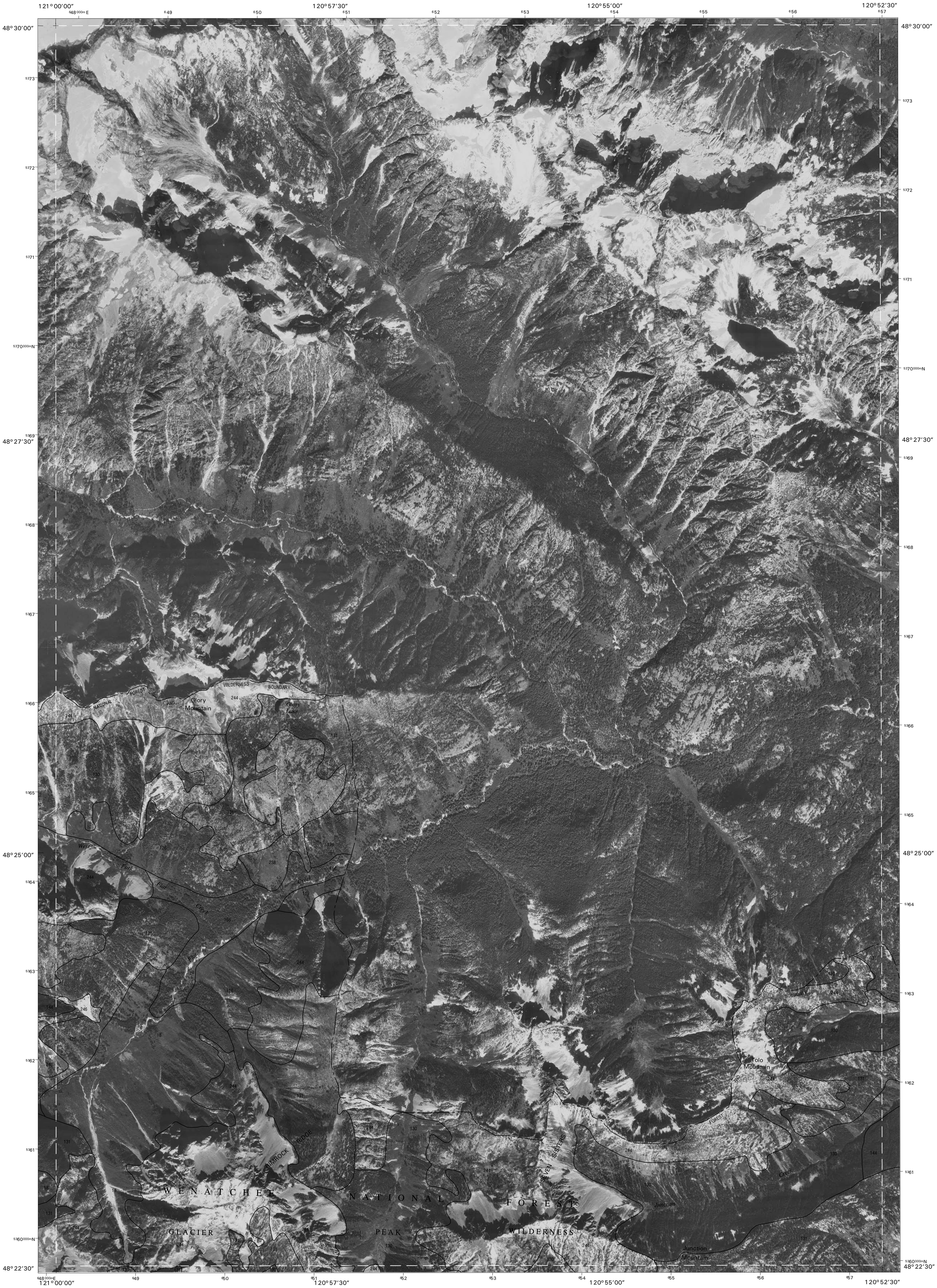
1 ELDORADO PEAK
2 FORBIDDEN PEAK
3 MOUNT LOGAN
4 SONNY BOY LAKES
5 GOODE MOUNTAIN (SHEET 2)
6 DOWNEY MOUNTAIN
7 DOME PEAK (SHEET 4)
8 AGNES MOUNTAIN (SHEET 5)

INDEX TO ADJOINING 7.5 MAPS

CASCADE PASS, WASHINGTON
7.5 MINUTE SERIES
SHEET NUMBER 1 OF 70

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
GOODE MOUNTAIN QUADRANGLE
SHEET NUMBER 2 OF 70



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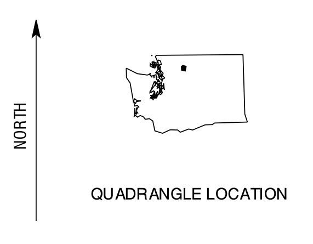
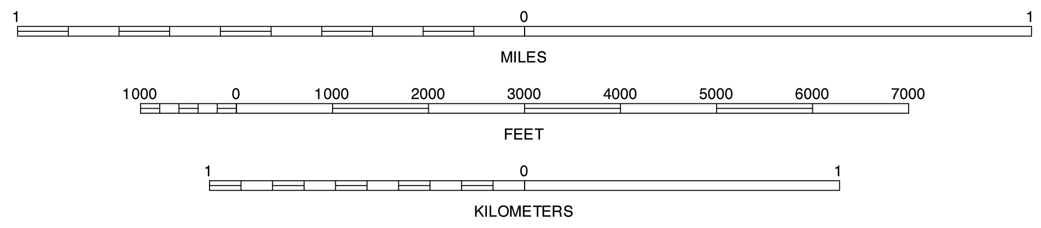


QUADRANGLE LOCATION

SCALE 1:24000



1	2	3
4		5
6	7	8

1 FORBIDDEN PEAK
2 MOUNT LOGAN
3 MOUNT ARRIVA
4 CASCADE PASS (SHEET 1)
5 MCGREGOR MOUNTAIN (SHEET 3)
6 DOME PEAK (SHEET 4)
7 AGNES MOUNTAIN (SHEET 5)
8 MOUNT LYALL (SHEET 6)

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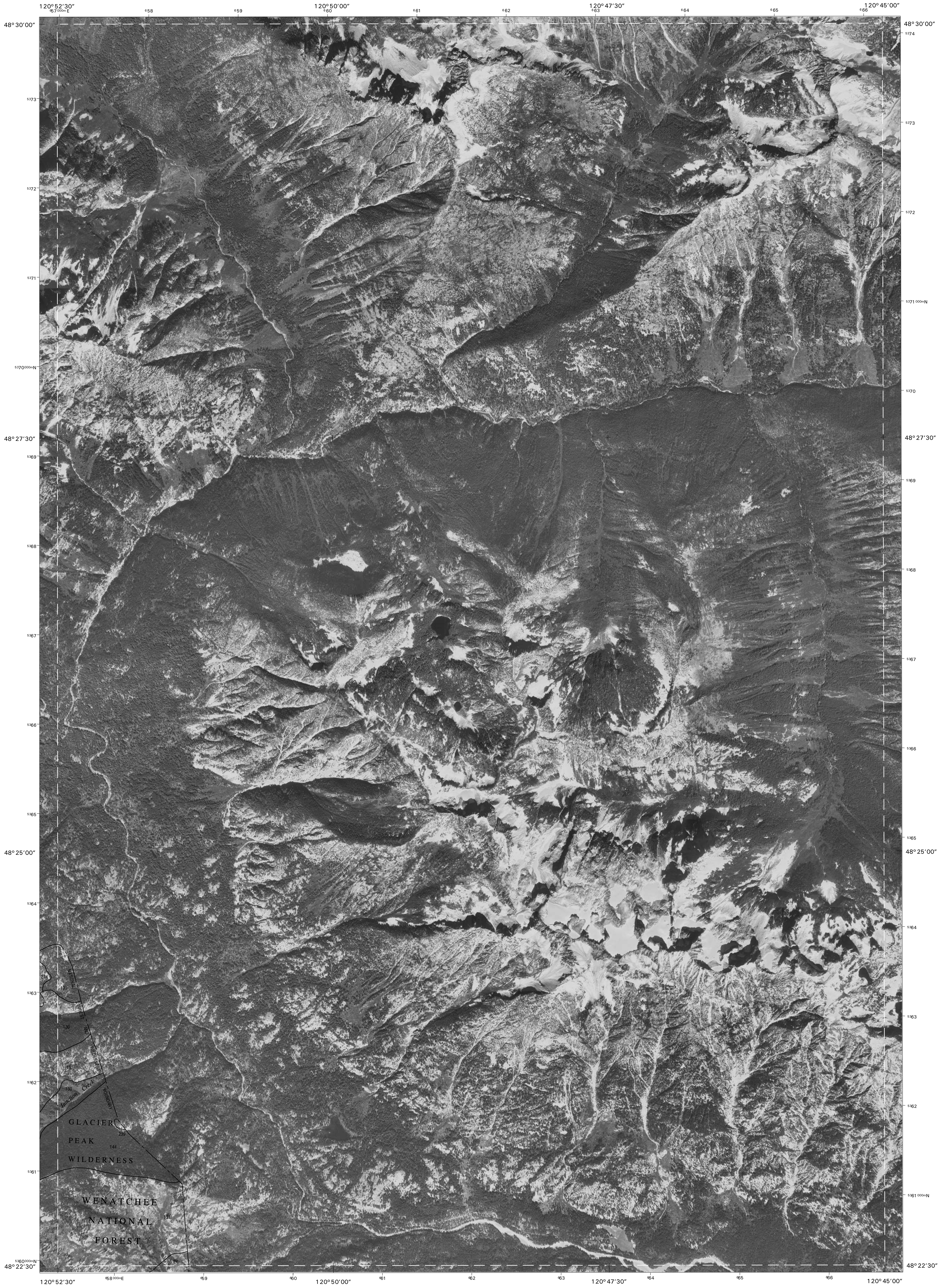
GOODE MOUNTAIN, WASHINGTON
7.5 MINUTE SERIES
SHEET NUMBER 2 OF 70

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
MCGREGOR MOUNTAIN QUADRANGLE
SHEET NUMBER 3 OF 70



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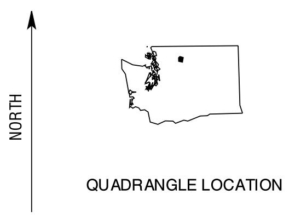

QUADRANGLE LOCATION

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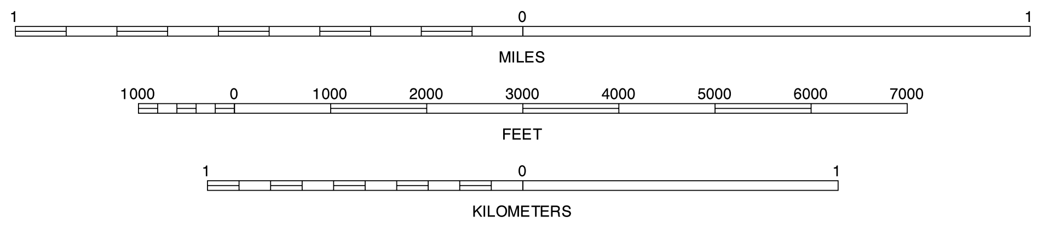

1	2	3
4		5
6	7	8

1 MOUNT LOGAN
2 MOUNT ARRIVA
3 WASHINGTON PASS
4 GOODE MOUNTAIN (SHEET 2)
5 MCALESTER MOUNTAIN
6 AGNES MOUNTAIN (SHEET 5)
7 MOUNT LYALL (SHEET 6)
8 STEHEKIN (SHEET 7)

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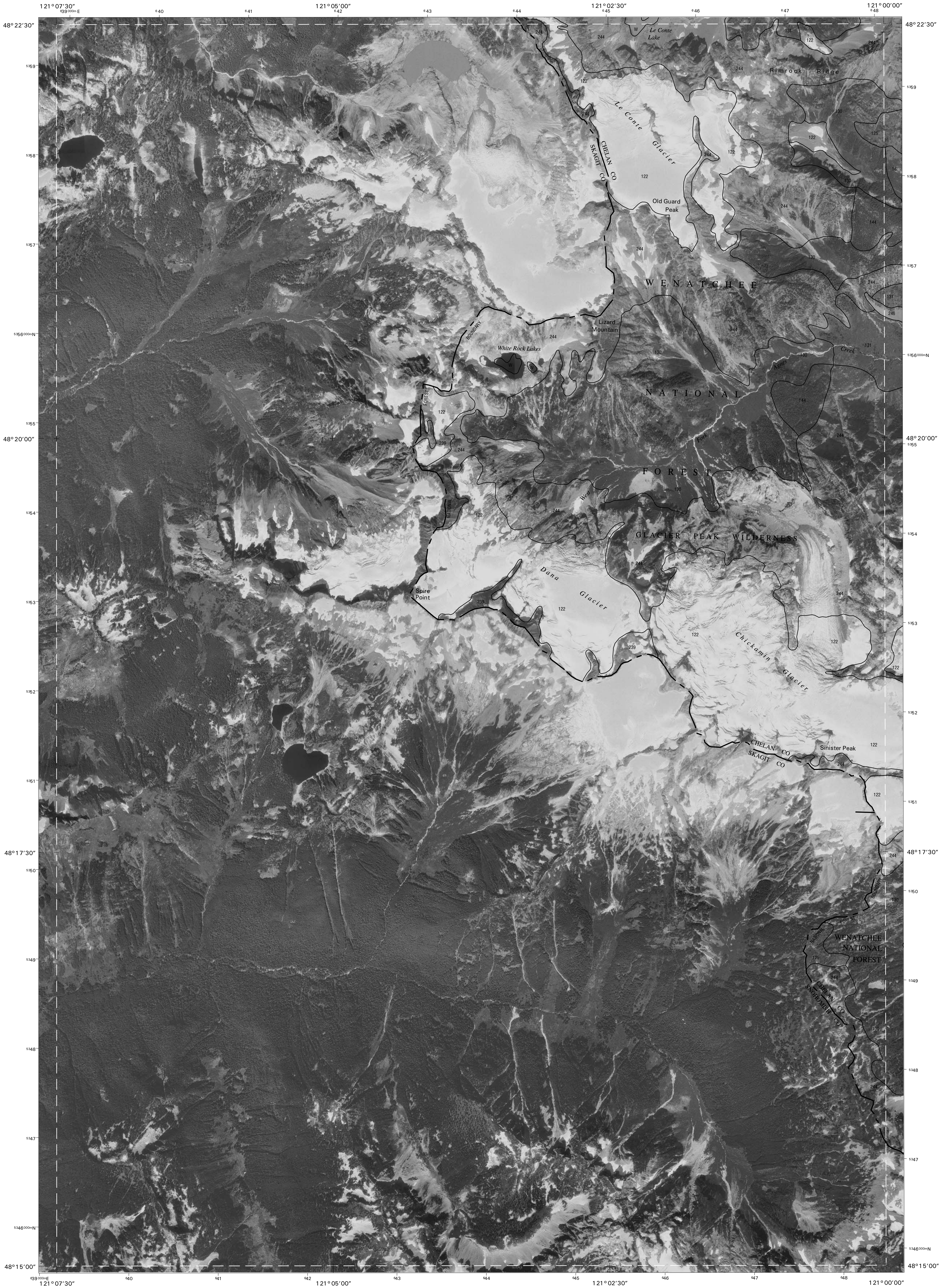
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
DOME PEAK QUADRANGLE
SHEET NUMBER 4 OF 70



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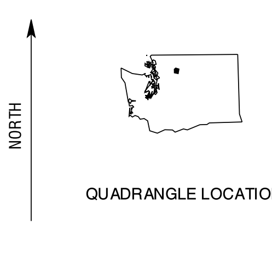
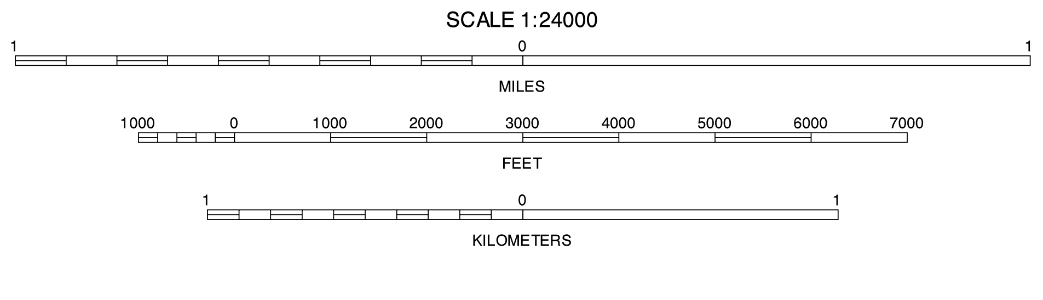
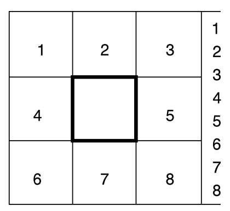


QUADRANGLE LOCATION





1 SONNY BOY LAKES
2 CASCADE PASS (SHEET 1)
3 GOODE MOUNTAIN (SHEET 2)
4 DOWNEY MOUNTAIN
5 AGNES MOUNTAIN (SHEET 5)
6 LIME MOUNTAIN
7 GAMMA PEAK
8 SUIATTLE PASS (SHEET 10)

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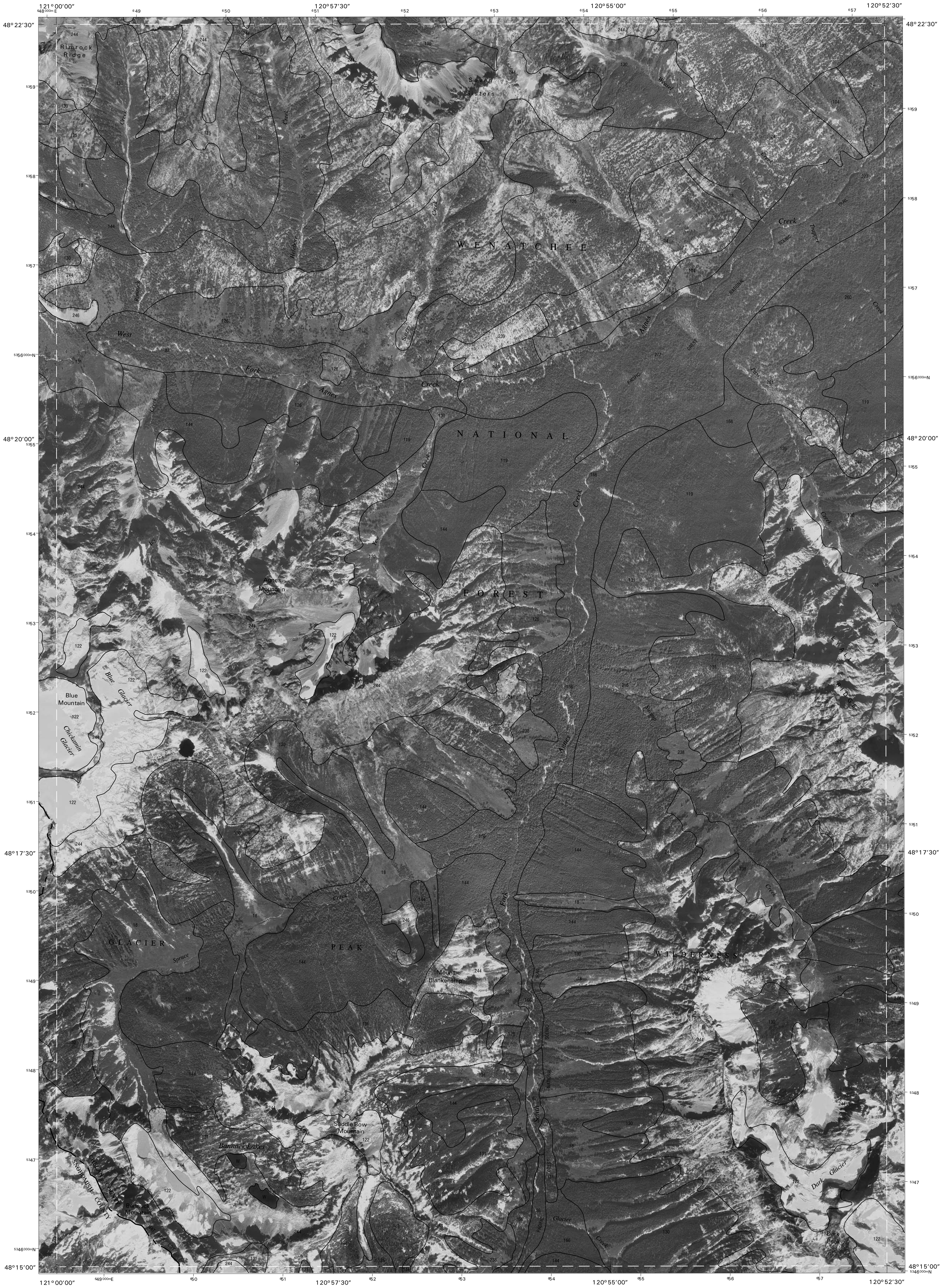
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
AGNES MOUNTAIN QUADRANGLE
SHEET NUMBER 5 OF 70



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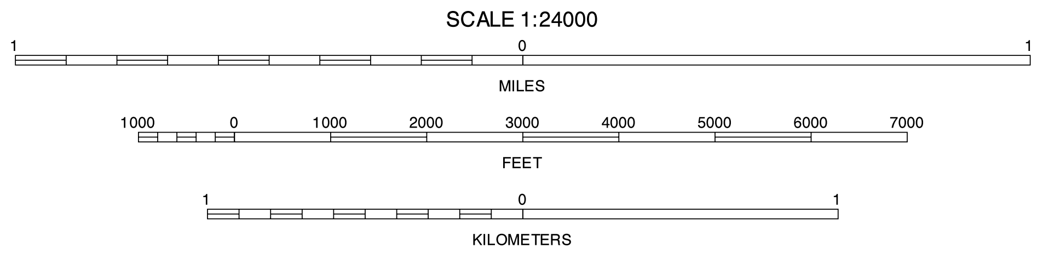

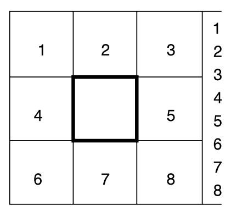

1 CASCADE PASS (SHEET 1)
2 GOODE MOUNTAIN (SHEET 2)
3 MCGREGOR MOUNTAIN (SHEET 3)
4 DOME PEAK (SHEET 4)
5 MOUNT LYALL (SHEET 6)
6 GAMMA PEAK
7 SUIATTLE PASS (SHEET 10)
8 HOLDEN (SHEET 11)

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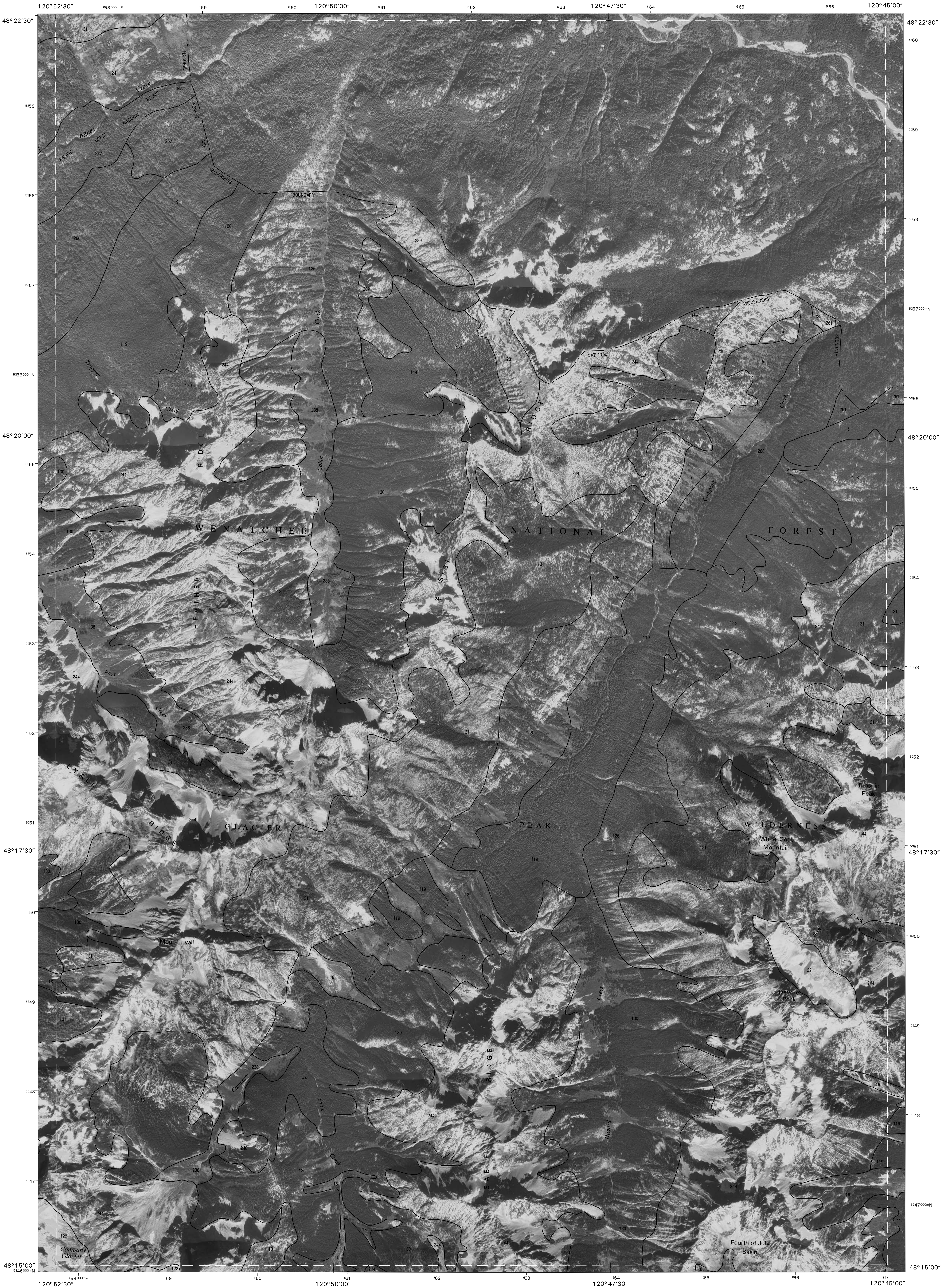
AGNES MOUNTAIN, WASHINGTON

7.5 MINUTE SERIES
SHEET NUMBER 5 OF 70

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
MOUNT LYALL QUADRANGLE
SHEET NUMBER 6 OF 70



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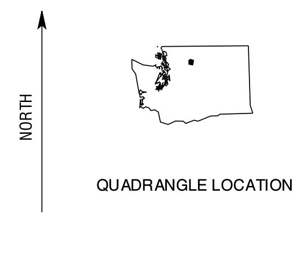
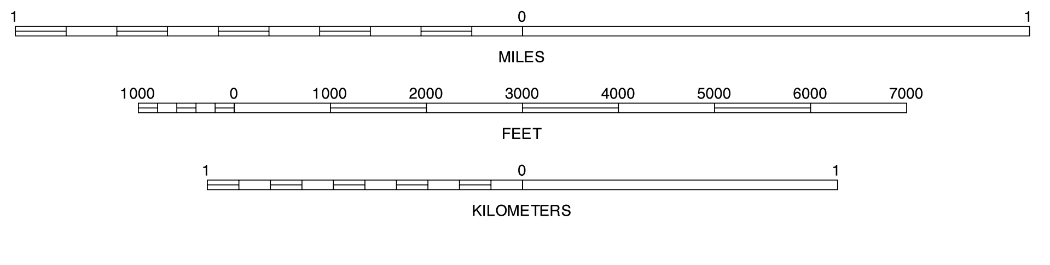
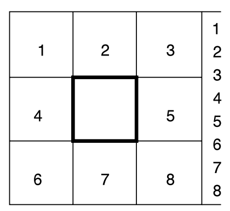
North American Datum of 1983 (NAD83). GRS - 80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000





1 GOODE MOUNTAIN (SHEET 2)
2 MCGREGOR MOUNTAIN (SHEET 3)
3 MCALESTER MOUNTAIN
4 AGNES MOUNTAIN (SHEET 5)
5 STEHEKIN (SHEET 7)
6 SUIATTLE PASS (SHEET 10)
7 HOLDEN (SHEET 11)
8 PINNACLE MOUNTAIN (SHEET 12)

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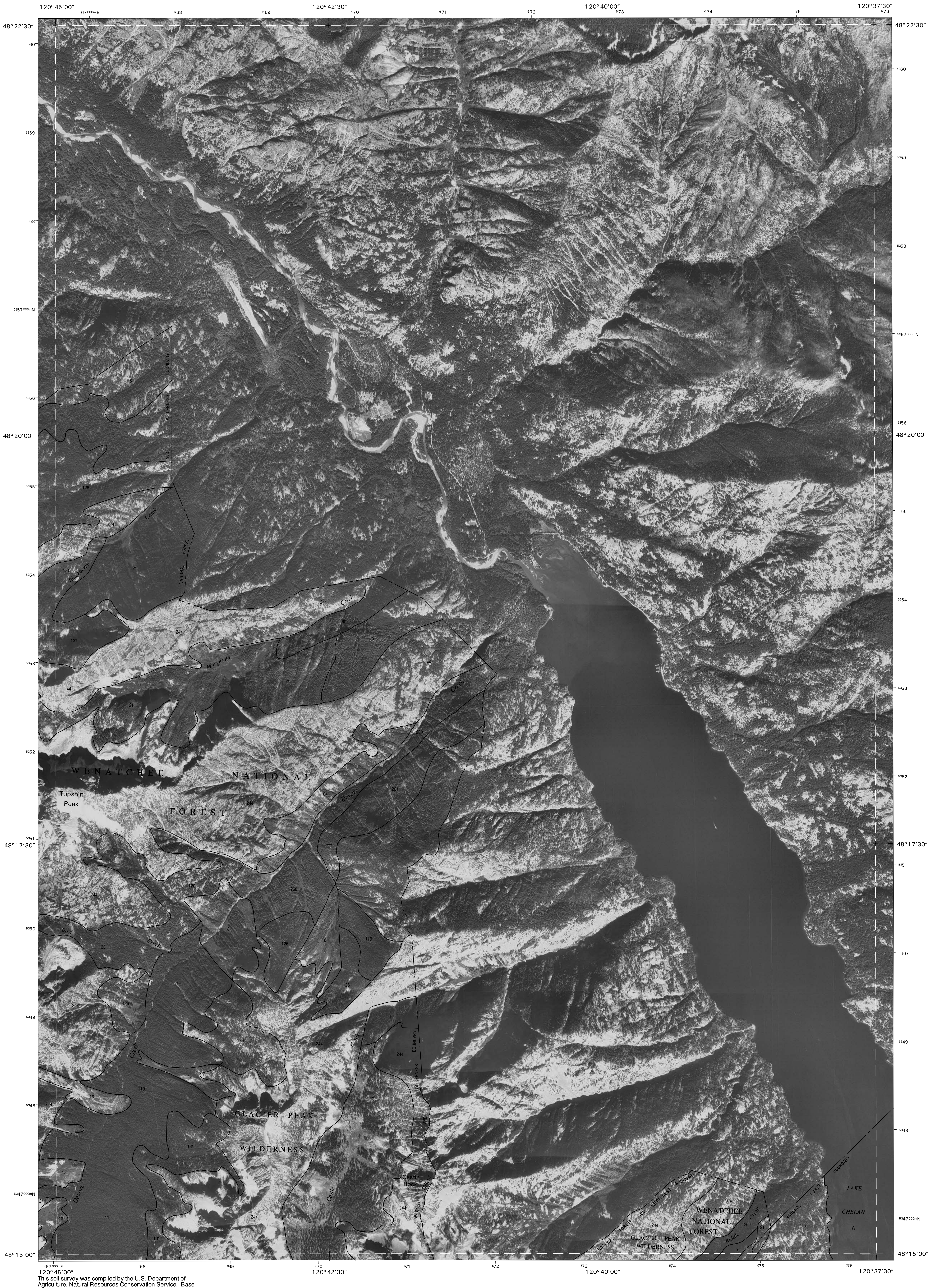
7.5 MINUTE SERIES
SHEET NUMBER 6 OF 70

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
STEHEKIN QUADRANGLE
SHEET NUMBER 7 OF 70



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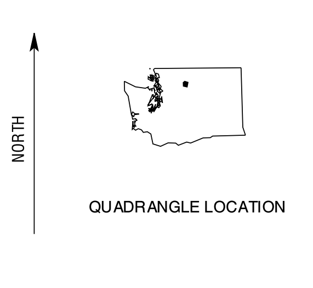
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

1	2	3
4		5
6	7	8

1 MCGREGOR MOUNTAIN (SHEET 3)
2 MCALESTER MOUNTAIN
3 GILBERT
4 MOUNT LYALL (SHEET 6)
5 SUN MOUNTAIN (SHEET 8)
6 HOLDEN (SHEET 11)
7 PINNACLE MOUNTAIN (SHEET 12)
8 LUCERNE (SHEET 13)

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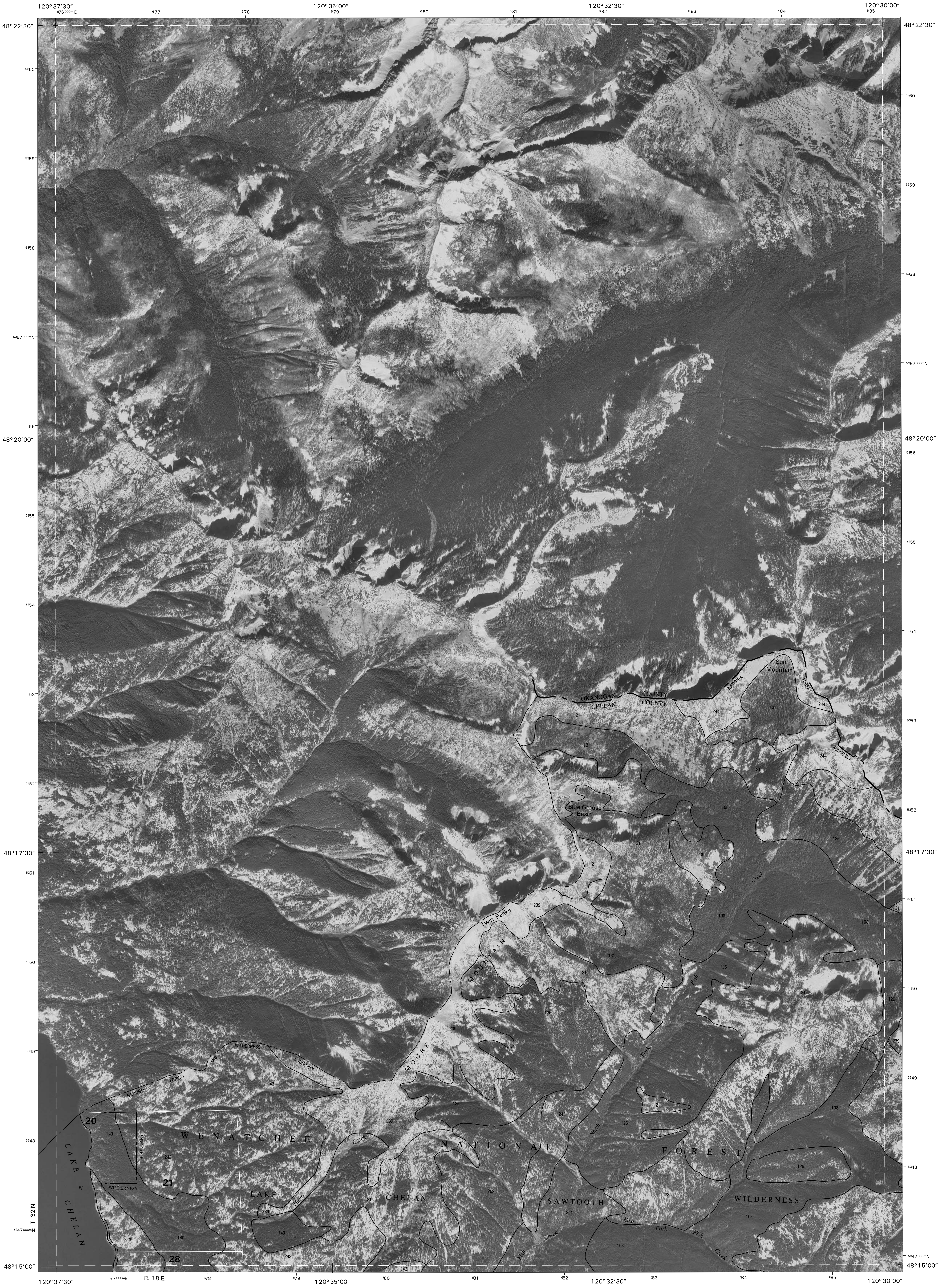
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
SUN MOUNTAIN QUADRANGLE
SHEET NUMBER 8 OF 70



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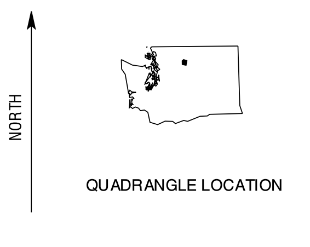
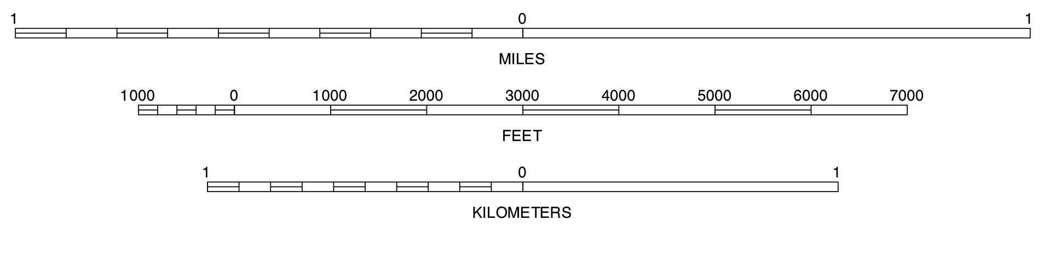
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000



1	2	3
4		5
6	7	8

1 MCALESTER MOUNTAIN
2 GILBERT
3 MIDNIGHT MOUNTAIN
4 STEHEKIN (SHEET 7)
5 OVAL PEAK (SHEET 9)
6 PINNACLE MOUNTAIN (SHEET 12)
7 LUCERNE (SHEET 13)
8 PRINCE CREEK (SHEET 14)

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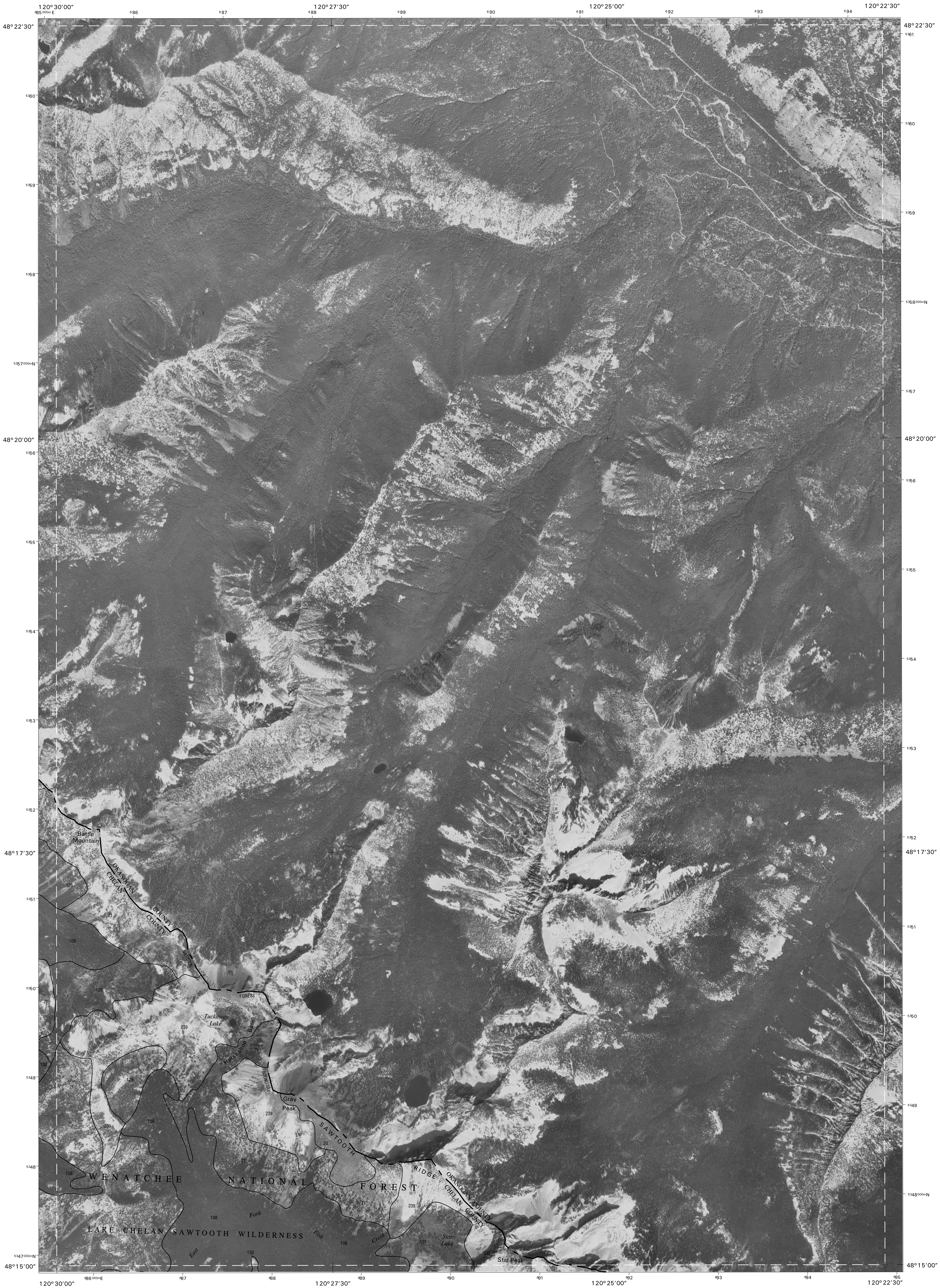
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
OVAL PEAK QUADRANGLE
SHEET NUMBER 9 OF 70



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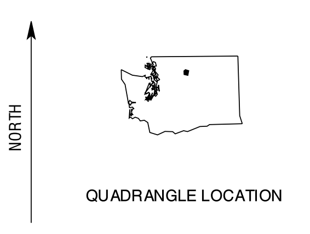
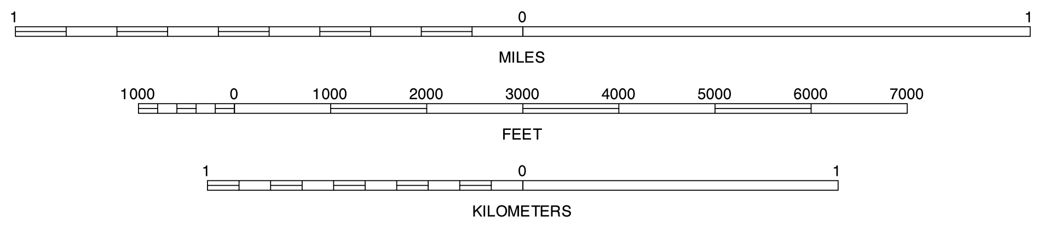
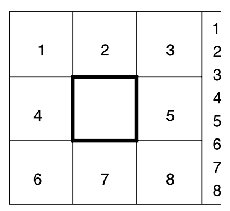


QUADRANGLE LOCATION

SCALE 1:24000





1 GILBERT
2 MIDNIGHT MOUNTAIN
3 THOMPSON RIDGE
4 SUN MOUNTAIN (SHEET 8)
5 HOODOO PEAK
6 LUCERNE (SHEET 13)
7 PRINCE CREEK (SHEET 14)
8 MARTIN PEAK (SHEET 15)

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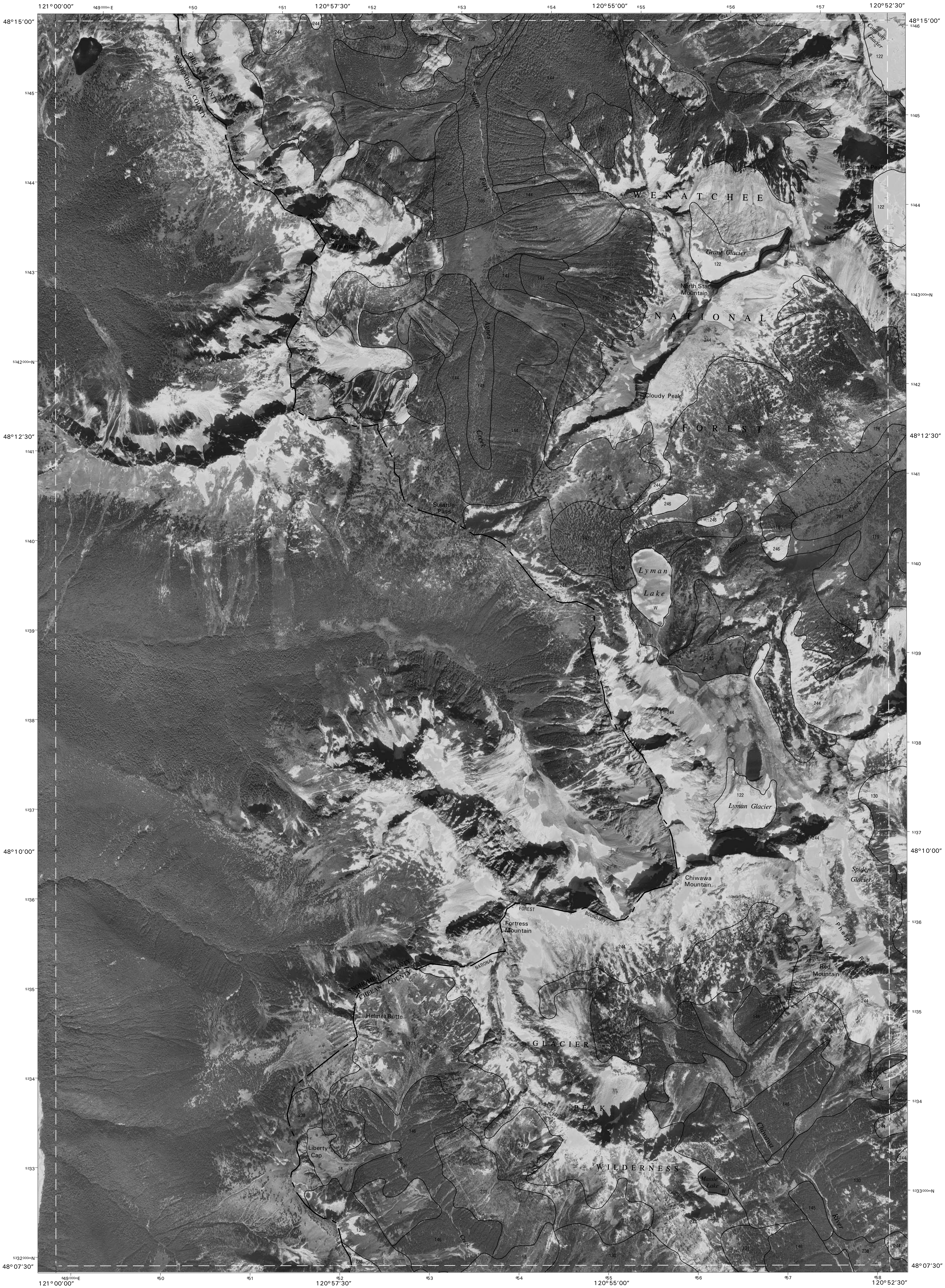
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
SUIATTLE PASS QUADRANGLE
SHEET NUMBER 10 OF 70



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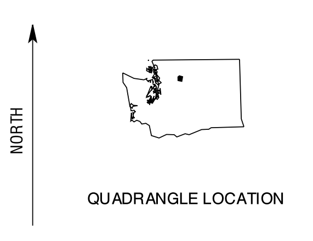

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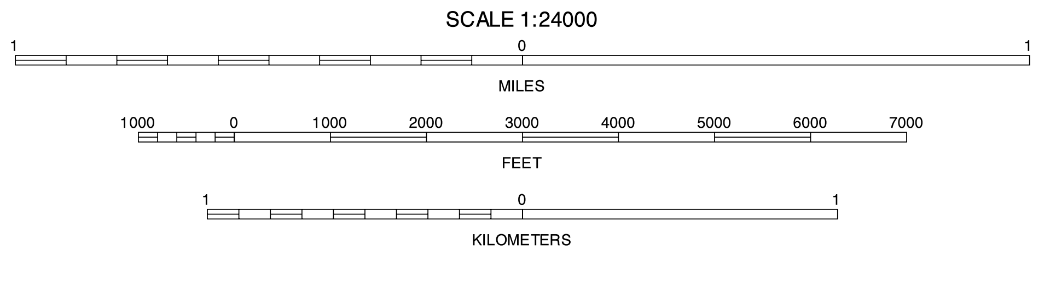

1	2	3
4		5
6	7	8

1 DOME PEAK (SHEET 4)
2 AGNES MOUNTAIN (SHEET 5)
3 MOUNT LYALL (SHEET 6)
4 GAMMA PEAK
5 HOLDEN (SHEET 11)
6 GLACIER PEAK EAST (SHEET 17)
7 CLARK MOUNTAIN (SHEET 18)
8 TRINITY (SHEET 19)

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UNITED STATES
DEPARTMENT OF AGRICULTURE
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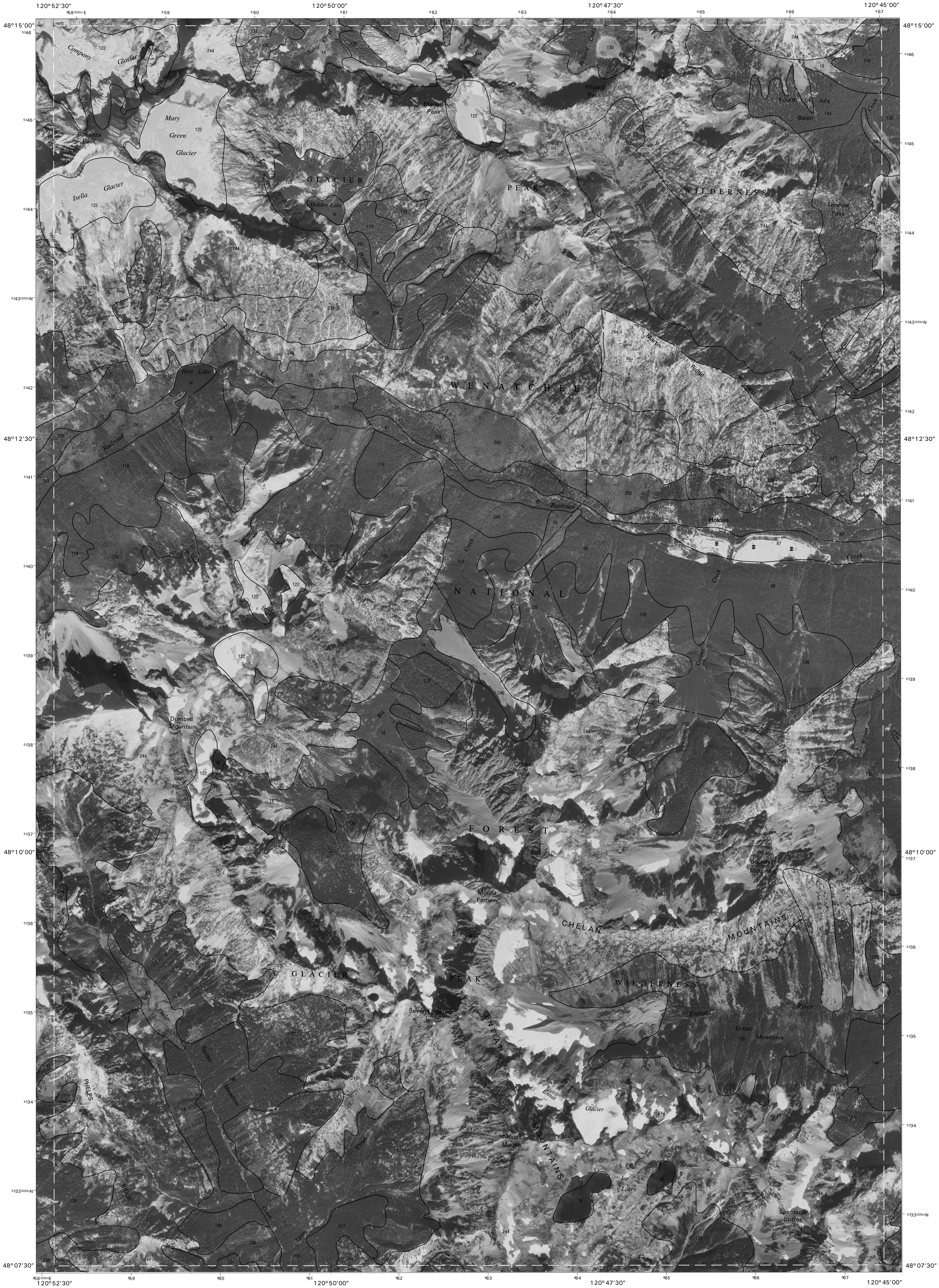
CASHMERE MOUNTAIN AREA, WASHINGTON
HOLDEN QUADRANGLE
SHEET NUMBER 11 OF 70



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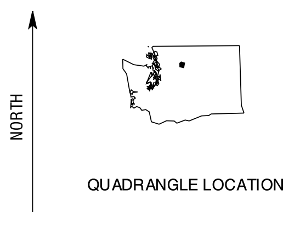
North American Datum of 1983 (NAD83). GRS - 80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.
Digital data are available for this quadrangle.



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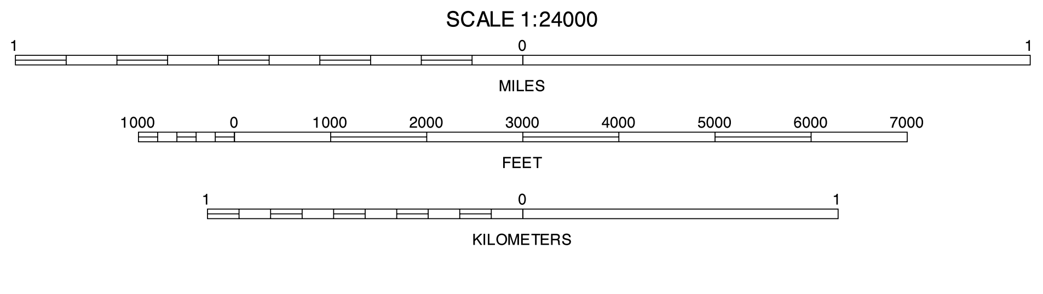

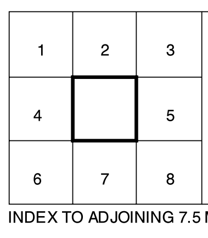

1 AGNES MOUNTAIN (SHEET 5)
2 MOUNT LYALL (SHEET 6)
3 STEHEKIN (SHEET 7)
4 SUIATTLE PASS (SHEET 10)
5 PINNACLE MOUNTAIN (SHEET 12)
6 CLARK MOUNTAIN (SHEET 18)
7 TRINITY (SHEET 19)
8 SASKA PEAK (SHEET 20)

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UNITED STATES
DEPARTMENT OF AGRICULTURE
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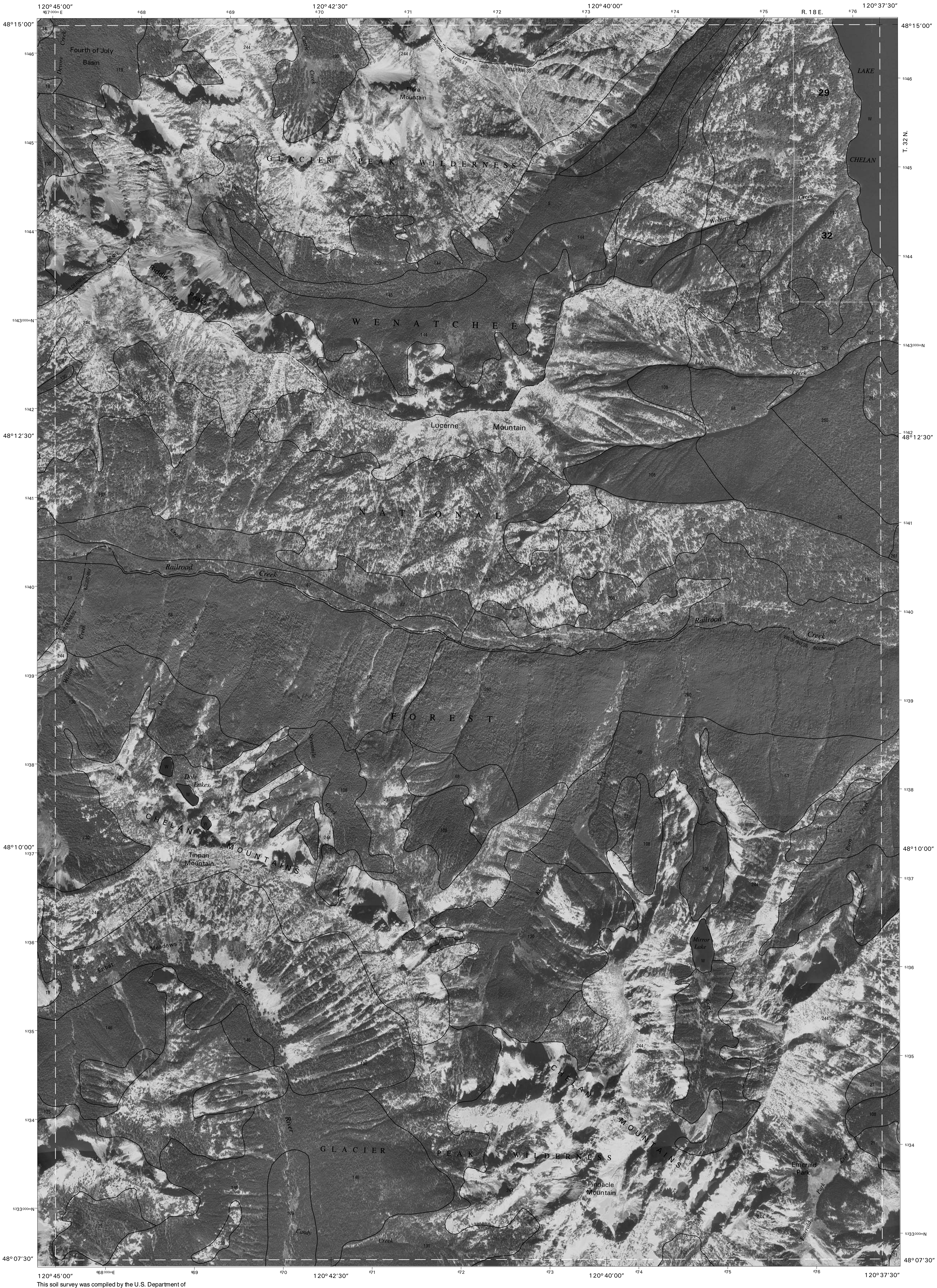
CASHMERE MOUNTAIN AREA, WASHINGTON
PINNACLE MOUNTAIN QUADRANGLE
SHEET NUMBER 12 OF 70



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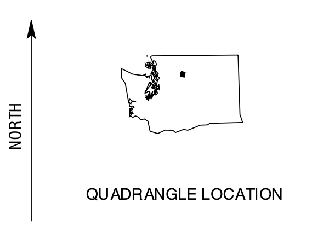
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

1 MOUNT LYALL (SHEET 6)
2 STEHEKIN (SHEET 7)
3 SUN MOUNTAIN (SHEET 8)
4 HOLDEN (SHEET 11)
5 LUCERNE (SHEET 13)
6 TRINITY (SHEET 19)
7 SASKA PEAK (SHEET 20)
8 PYRAMID MOUNTAIN (SHEET 21)

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DEPARTMENT OF AGRICULTURE
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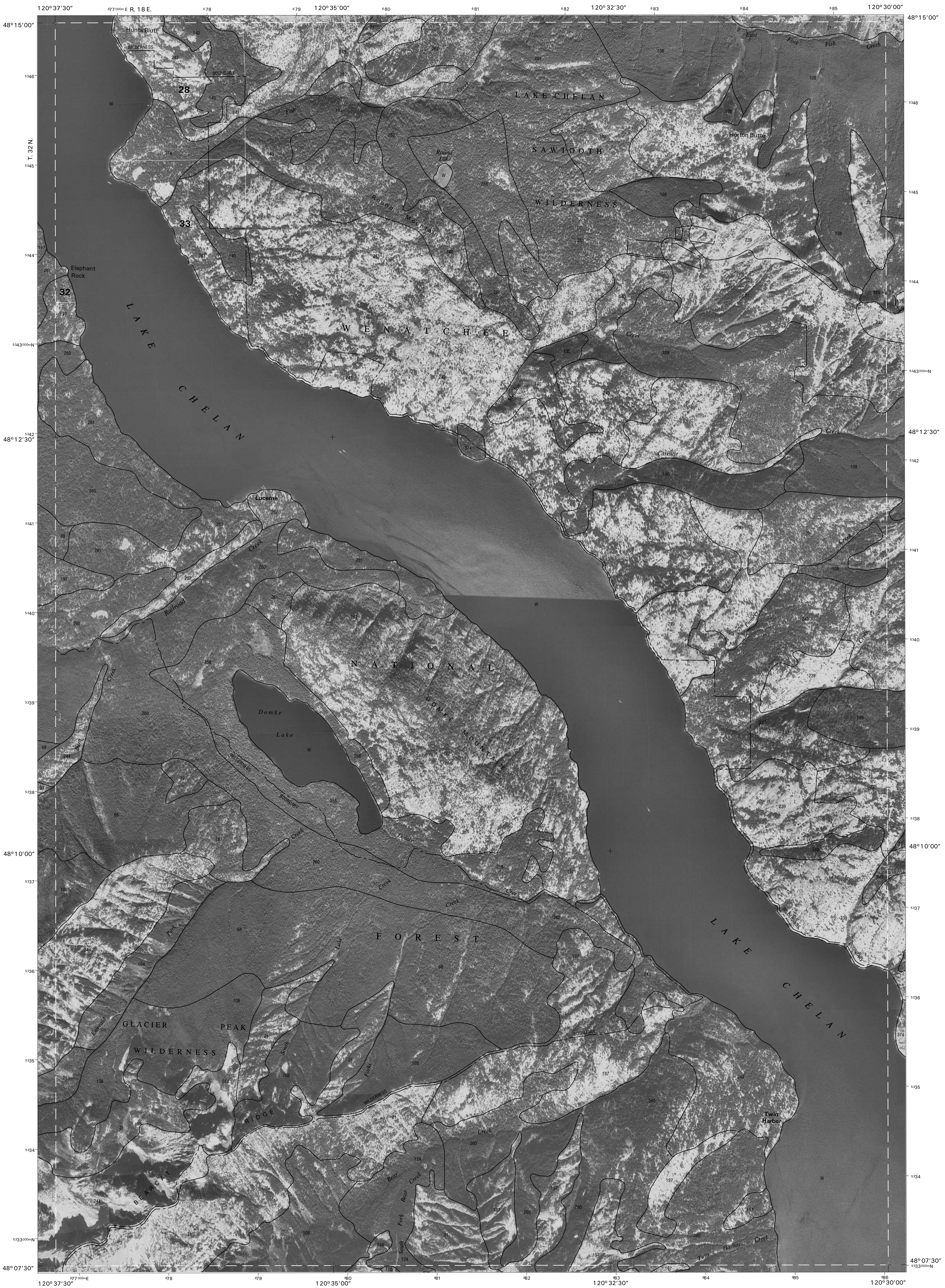
CASHMERE MOUNTAIN AREA, WASHINGTON
LUCERNE QUADRANGLE
SHEET NUMBER 13 OF 70



120°37'30"

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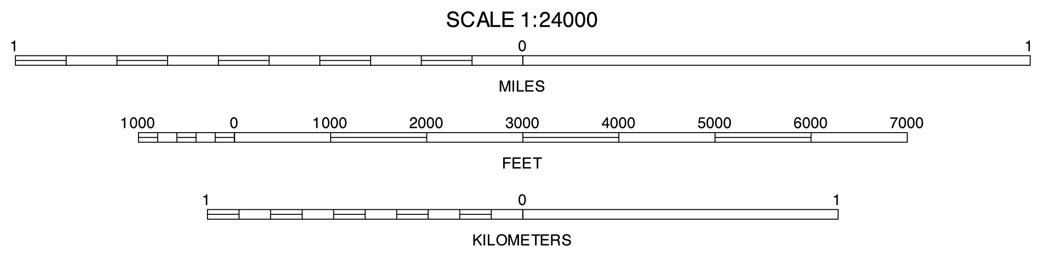
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

QUADRANGLE LOCATION



1	2	3
4		5
6	7	8

1 STEHEKIN (SHEET 7)
2 SUN MOUNTAIN (SHEET 8)
3 OVAL PEAK (SHEET 9)
4 PINNACLE MOUNTAIN (SHEET 12)
5 PRINCE CREEK (SHEET 14)
6 SASKA PEAK (SHEET 20)
7 PYRAMID MOUNTAIN (SHEET 21)
8 BIG GOAT MOUNTAIN (SHEET 22)

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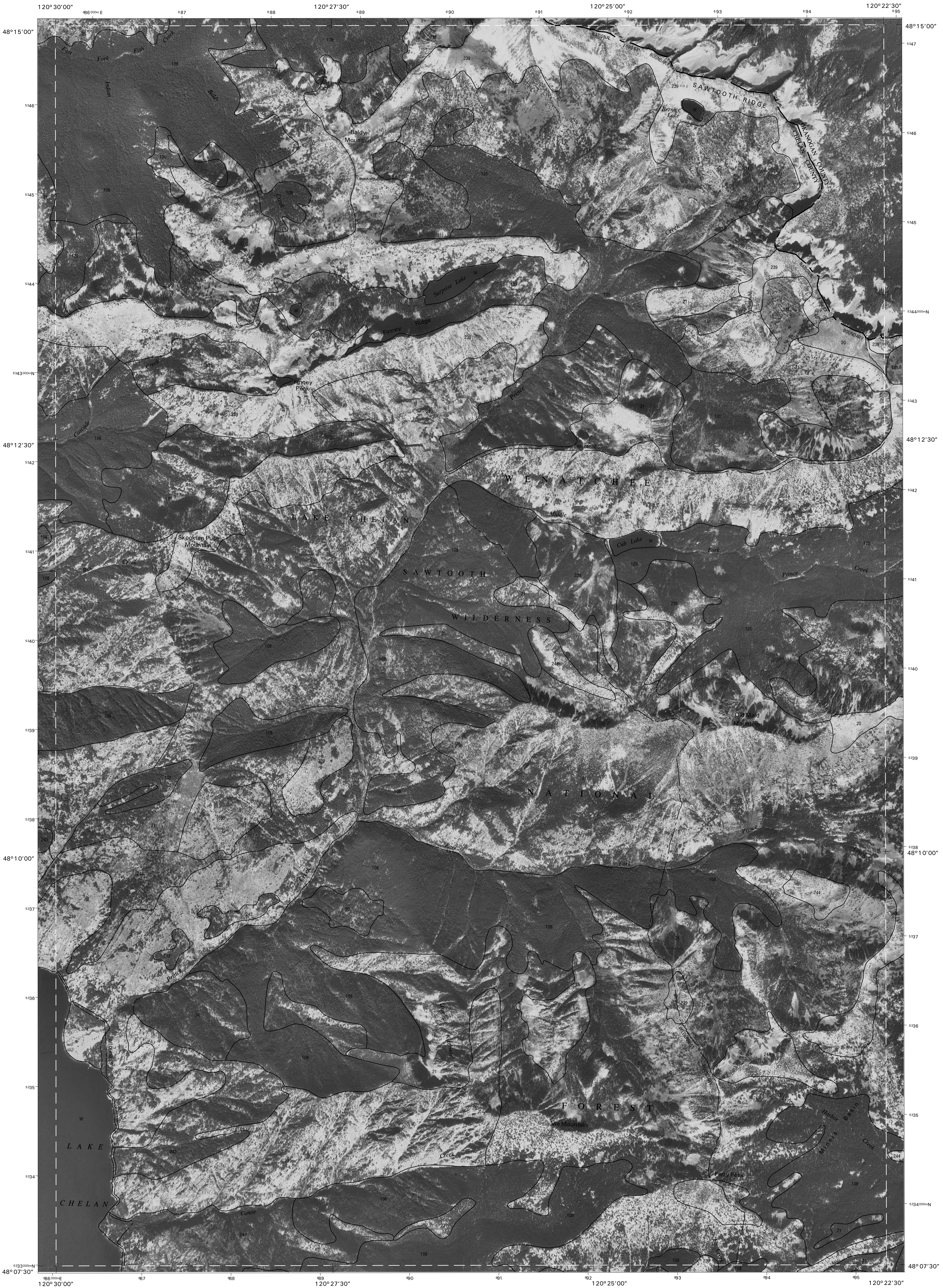
CASHMERE MOUNTAIN AREA, WASHINGTON
PRINCE CREEK QUADRANGLE
SHEET NUMBER 14 OF 70



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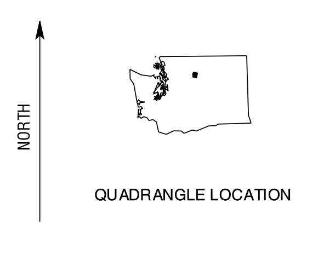

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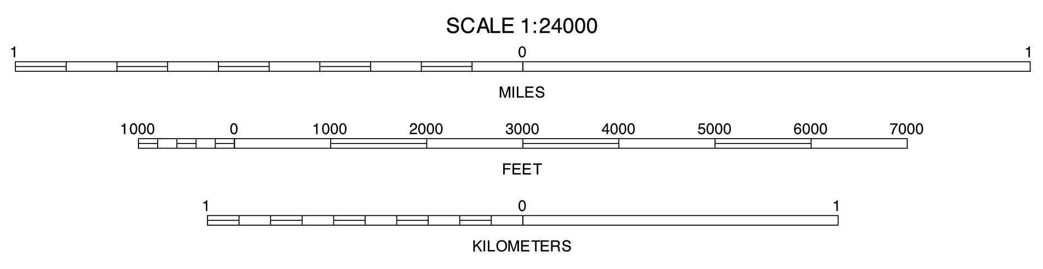
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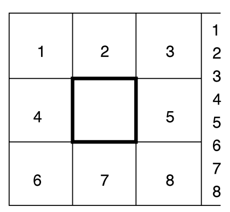

1 SUN MOUNTAIN (SHEET 8)
2 OVAL PEAK (SHEET 9)
3 HOODOO PEAK
4 LUCERNE (SHEET 13)
5 MARTIN PEAK (SHEET 15)
6 PYRAMID MOUNTAIN (SHEET 21)
7 BIG GOAT MOUNTAIN (SHEET 22)
8 SOUTH NAVARRE PEAK (SHEET 23)

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UNITED STATES
DEPARTMENT OF AGRICULTURE
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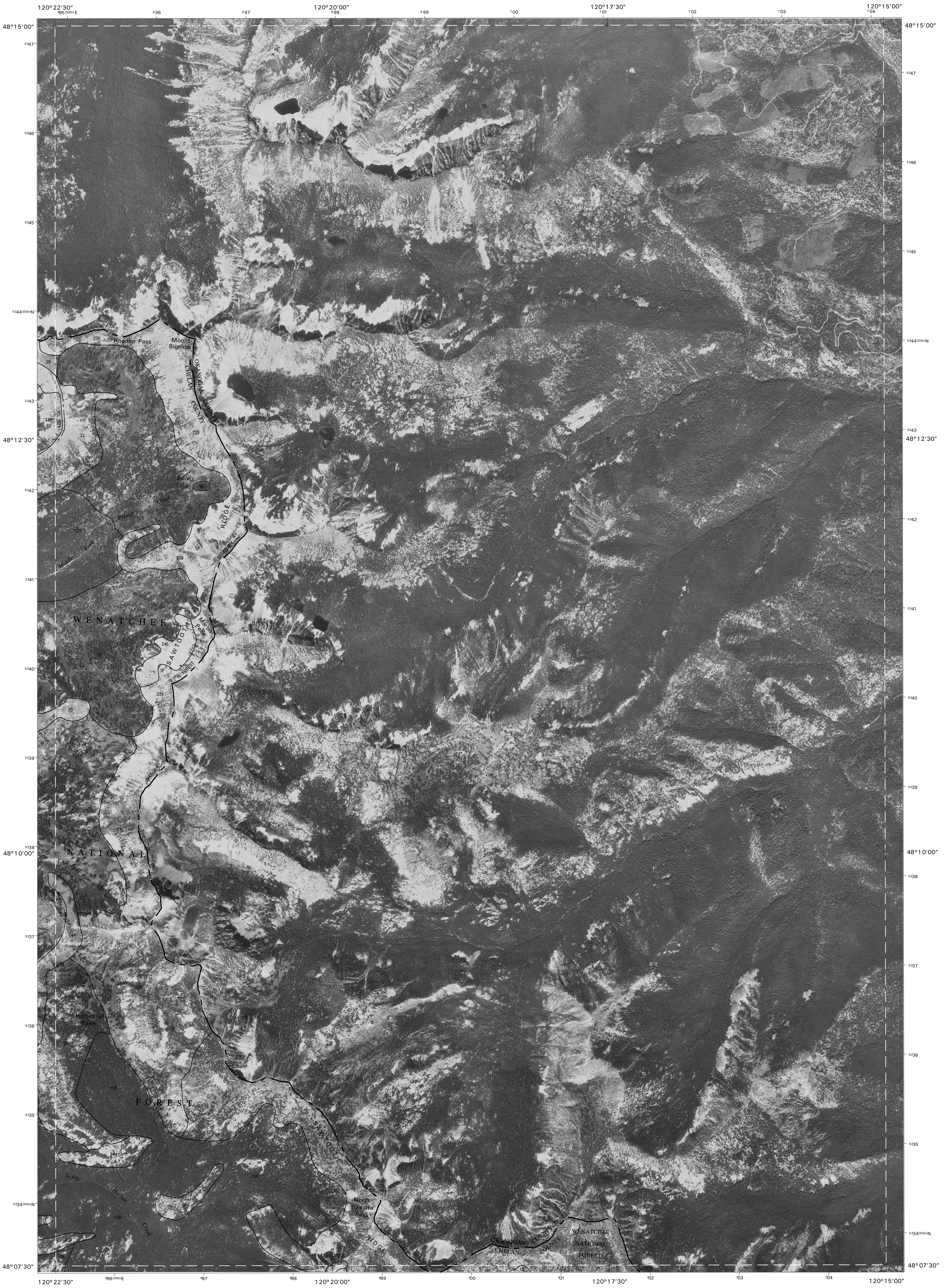
CASHMERE MOUNTAIN AREA, WASHINGTON
MARTIN PEAK QUADRANGLE
SHEET NUMBER 15 OF 70



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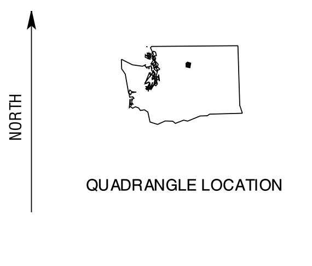
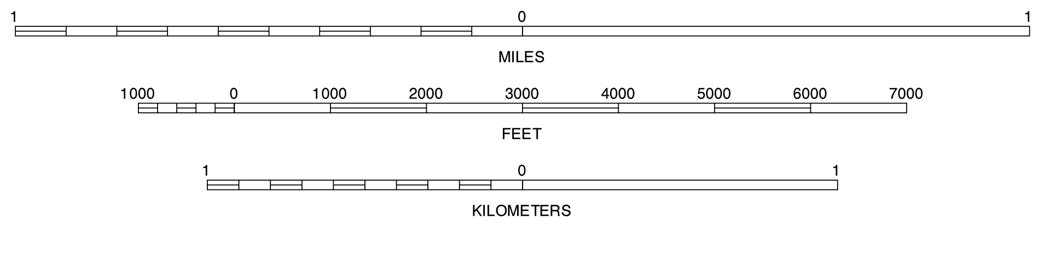
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000



1	2	3
4		5
6	7	8

1 OVAL PEAK (SHEET 9)
2 HOODOO PEAK
3 TWISP WEST
4 PRINCE CREEK (SHEET 14)
5 HUNGRY MOUNTAIN
6 BIG GOAT MOUNTAIN (SHEET 22)
7 SOUTH NAVARRE PEAK (SHEET 23)
8 OSS PEAK (SHEET 24)

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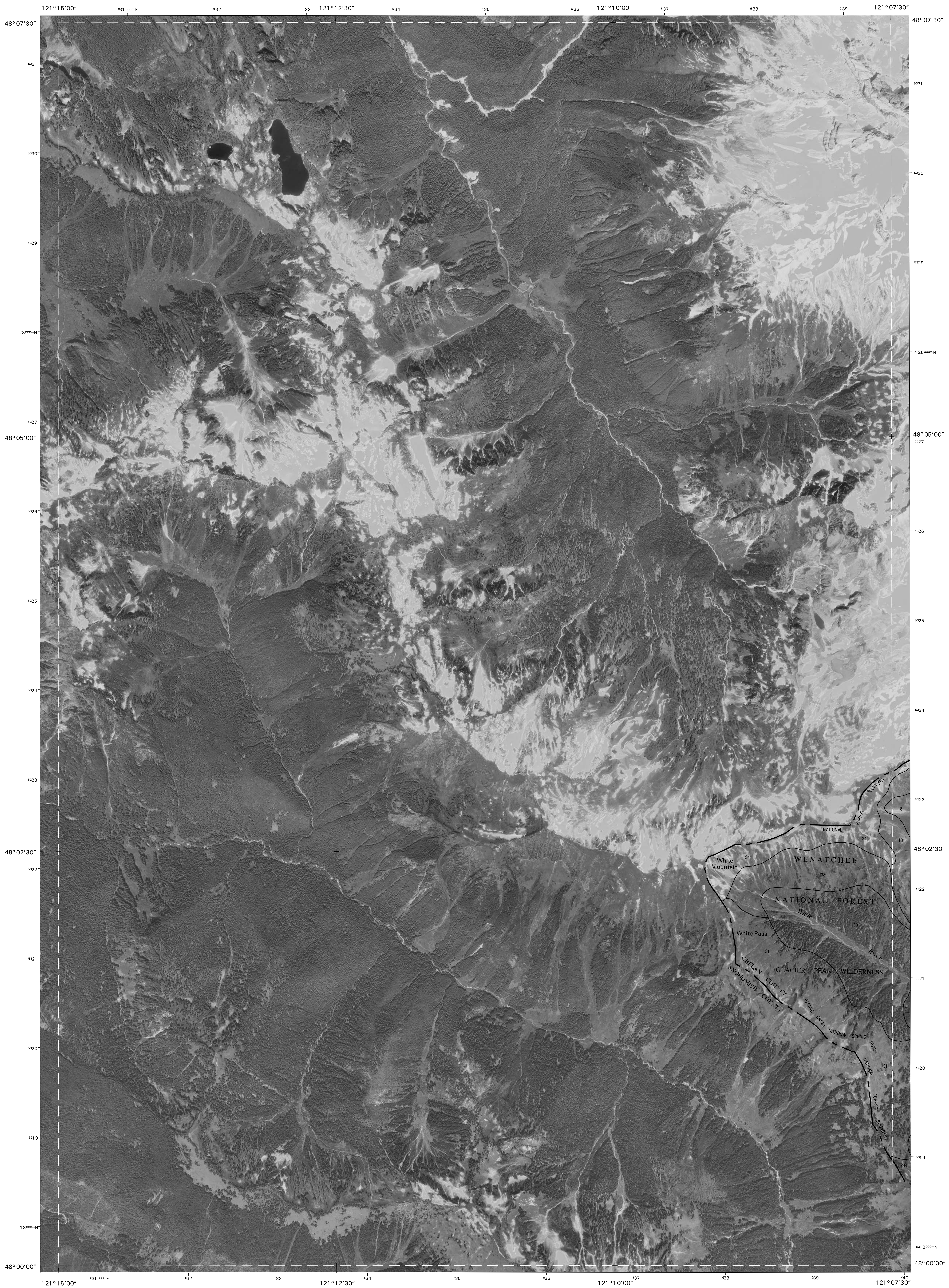
CASHMERE MOUNTAIN AREA, WASHINGTON
GLACIER PEAK WEST QUADRANGLE
SHEET NUMBER 16 OF 70



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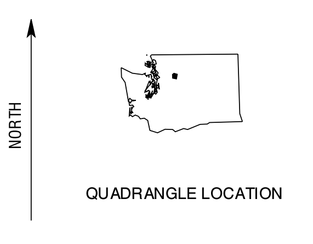
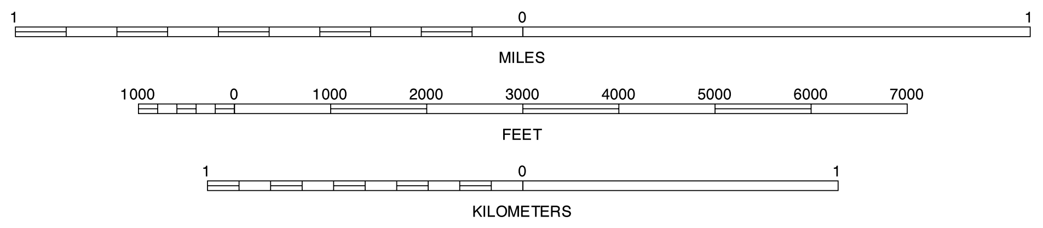


QUADRANGLE LOCATION

SCALE 1:24000



1	2	3
4		5
6	7	8

1 PUGH MOUNTAIN
2 LIME MOUNTAIN
3 GAMMA PEAK
4 SLOAN PEAK
5 GLACIER PEAK EAST (SHEET 17)
6 BLANCA LAKE
7 BENCHMARK MOUNTAIN (SHEET 27)
8 POE MOUNTAIN (SHEET 28)

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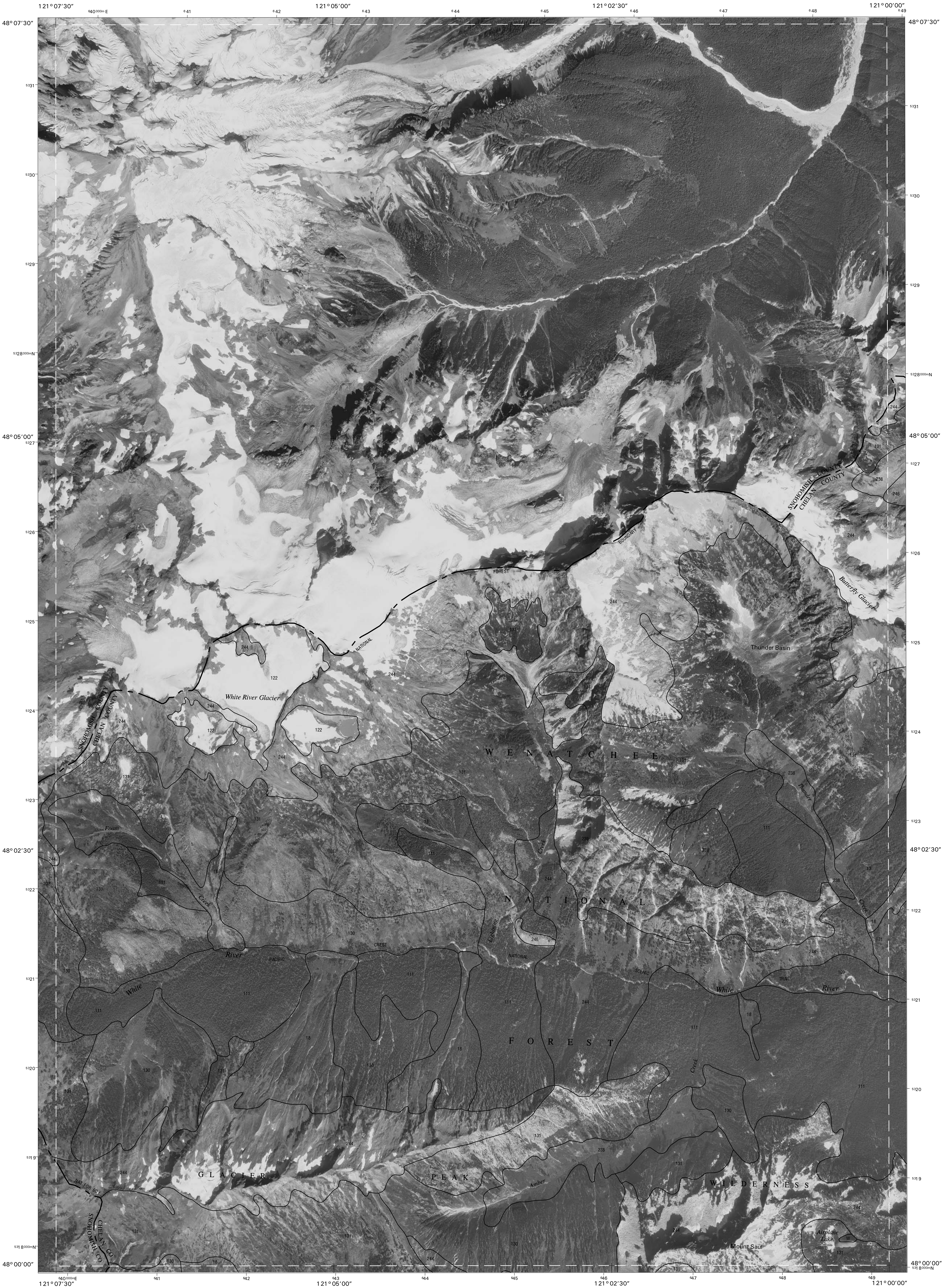
GLACIER PEAK WEST, WASHINGTON
7.5 MINUTE SERIES
SHEET NUMBER 16 OF 70

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
GLACIER PEAK EAST QUADRANGLE
SHEET NUMBER 17 OF 70



121°07'30"

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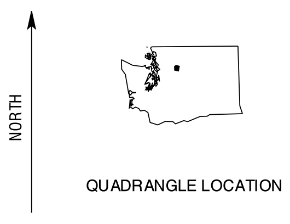
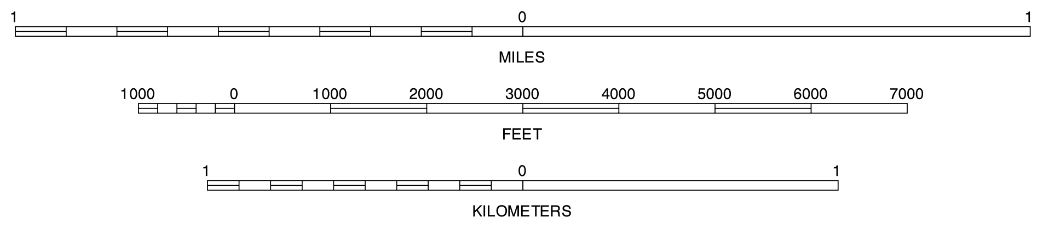
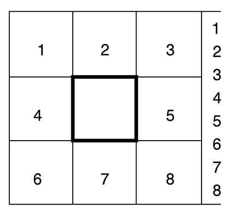
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000





1 LIME MOUNTAIN
2 GAMMA PEAK
3 SUIATTLE PASS (SHEET 10)
4 GLACIER PEAK WEST (SHEET 16)
5 CLARK MOUNTAIN (SHEET 18)
6 BENCHMARK MOUNTAIN (SHEET 27)
7 POE MOUNTAIN (SHEET 28)
8 MOUNT DAVID (SHEET 29)

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GLACIER PEAK EAST, WASHINGTON

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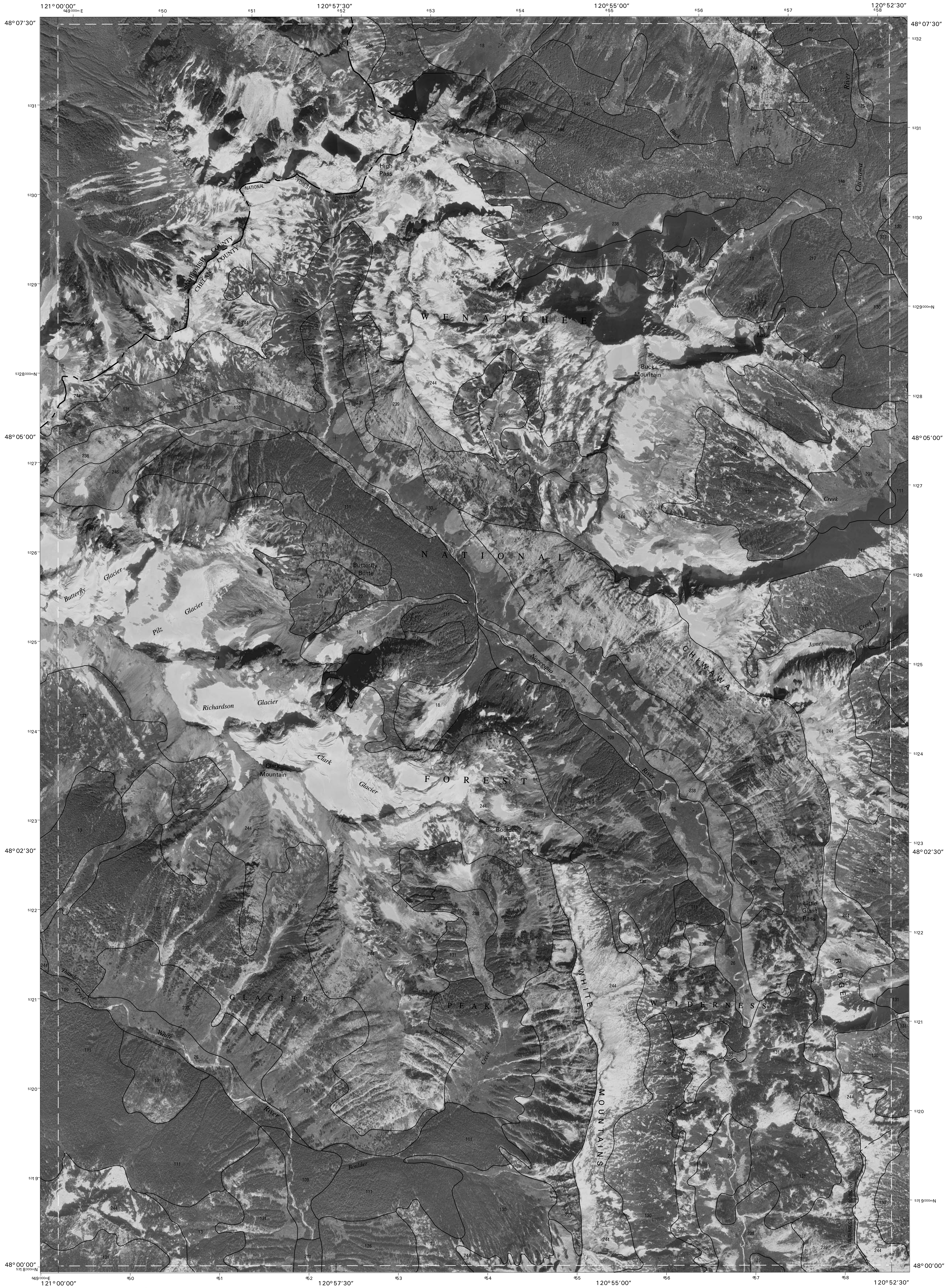
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
CLARK MOUNTAIN QUADRANGLE
SHEET NUMBER 18 OF 70



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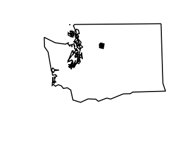
NORTH


QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

1 GAMMA PEAK
2 SUIATTLE PASS (SHEET 10)
3 HOLDEN (SHEET 11)
4 GLACIER PEAK EAST (SHEET 17)
5 TRINITY (SHEET 19)
6 POE MOUNTAIN (SHEET 28)
7 MOUNT DAVID (SHEET 29)
8 SCHAEFER LAKE (SHEET 30)

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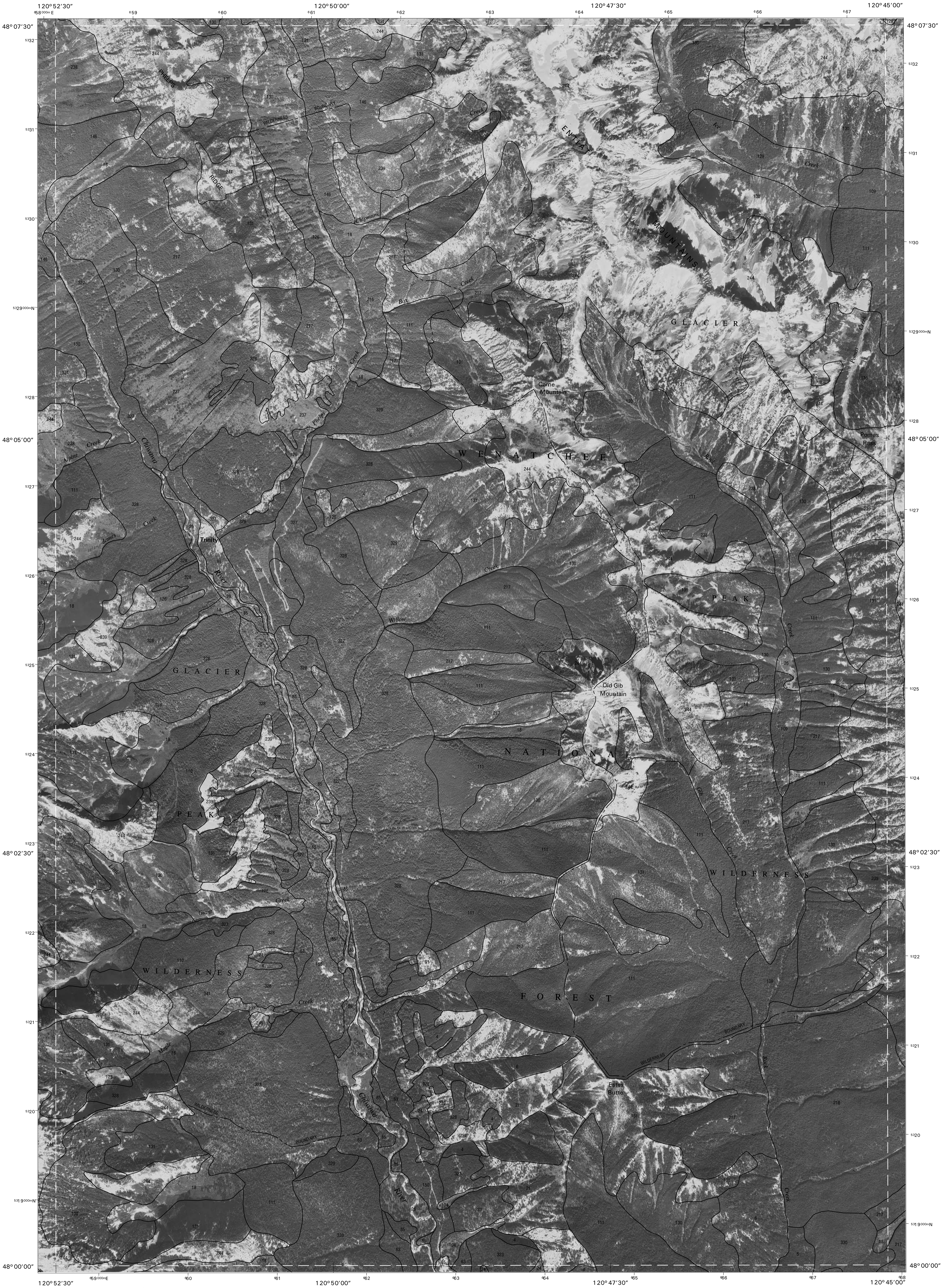
7.5 MINUTE SERIES
SHEET NUMBER 18 OF 70

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
TRINITY QUADRANGLE
SHEET NUMBER 19 OF 70



120°52′30″ 120°50′00″ 120°47′30″ 120°45′00″

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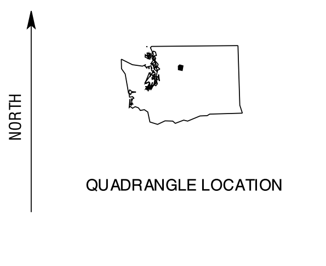
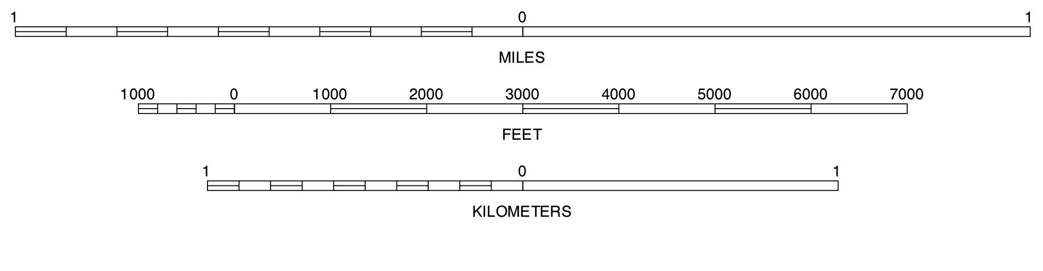
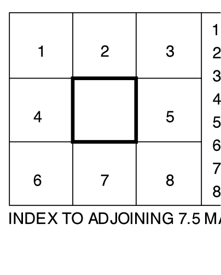


QUADRANGLE LOCATION





1 SUIATTLE PASS (SHEET 10)
2 HOLDEN (SHEET 11)
3 PINNACLE MOUNTAIN (SHEET 12)
4 CLARK MOUNTAIN (SHEET 18)
5 SASKA PEAK (SHEET 20)
6 MOUNT DAVID (SHEET 29)
7 SCHAEFER LAKE (SHEET 30)
8 CHIKAMIN CREEK (SHEET 31)

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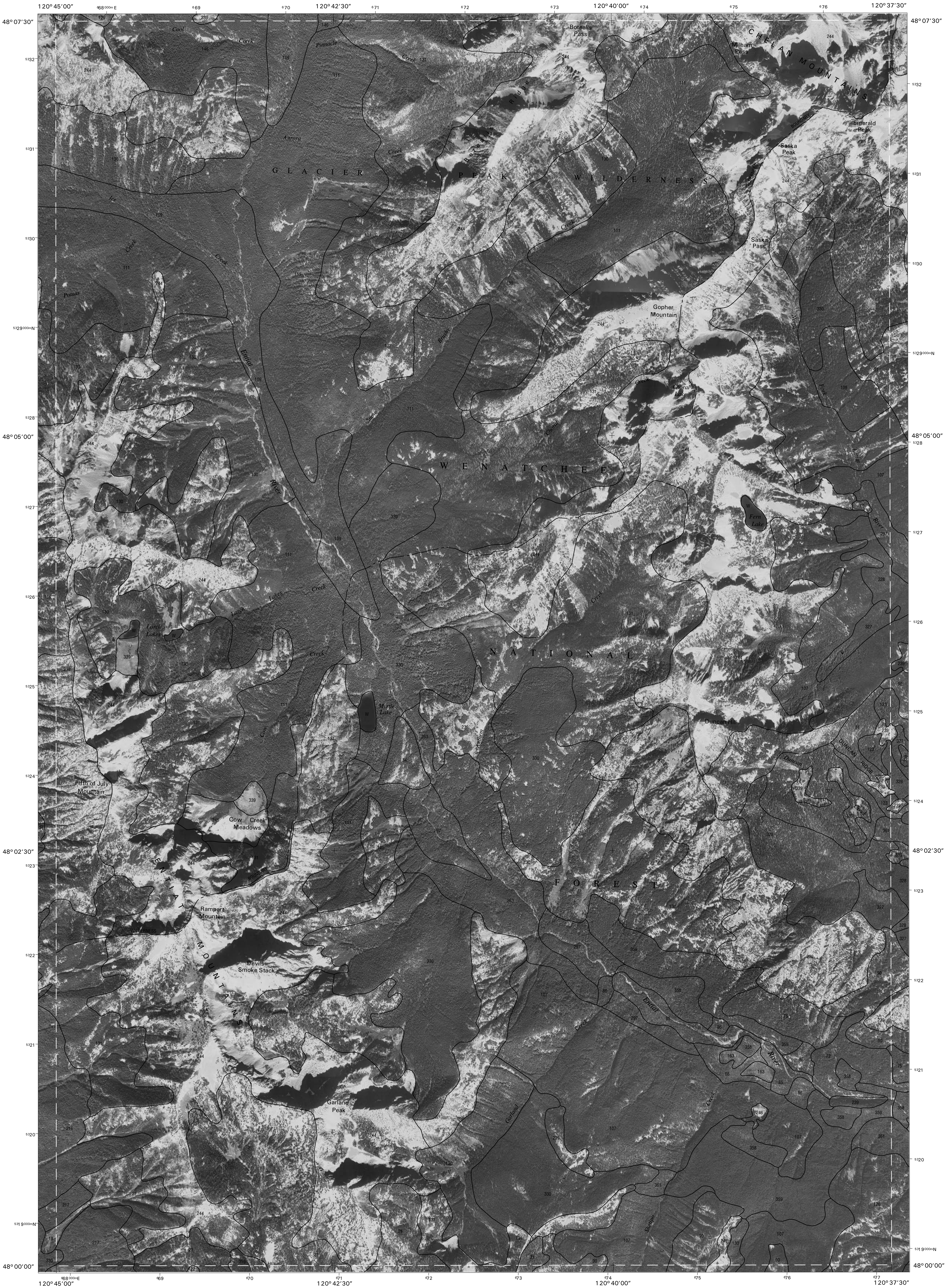
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
SASKA PEAK QUADRANGLE
SHEET NUMBER 20 OF 70



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North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

1 HOLDEN (SHEET 11)
2 PINNACLE MOUNTAIN (SHEET 12)
3 LUCERNE (SHEET 13)
4 TRINITY (SHEET 19)
5 PYRAMID MOUNTAIN (SHEET 21)
6 SCHAEFER LAKE (SHEET 30)
7 CHIKAMIN CREEK (SHEET 31)
8 SILVER FALLS (SHEET 32)

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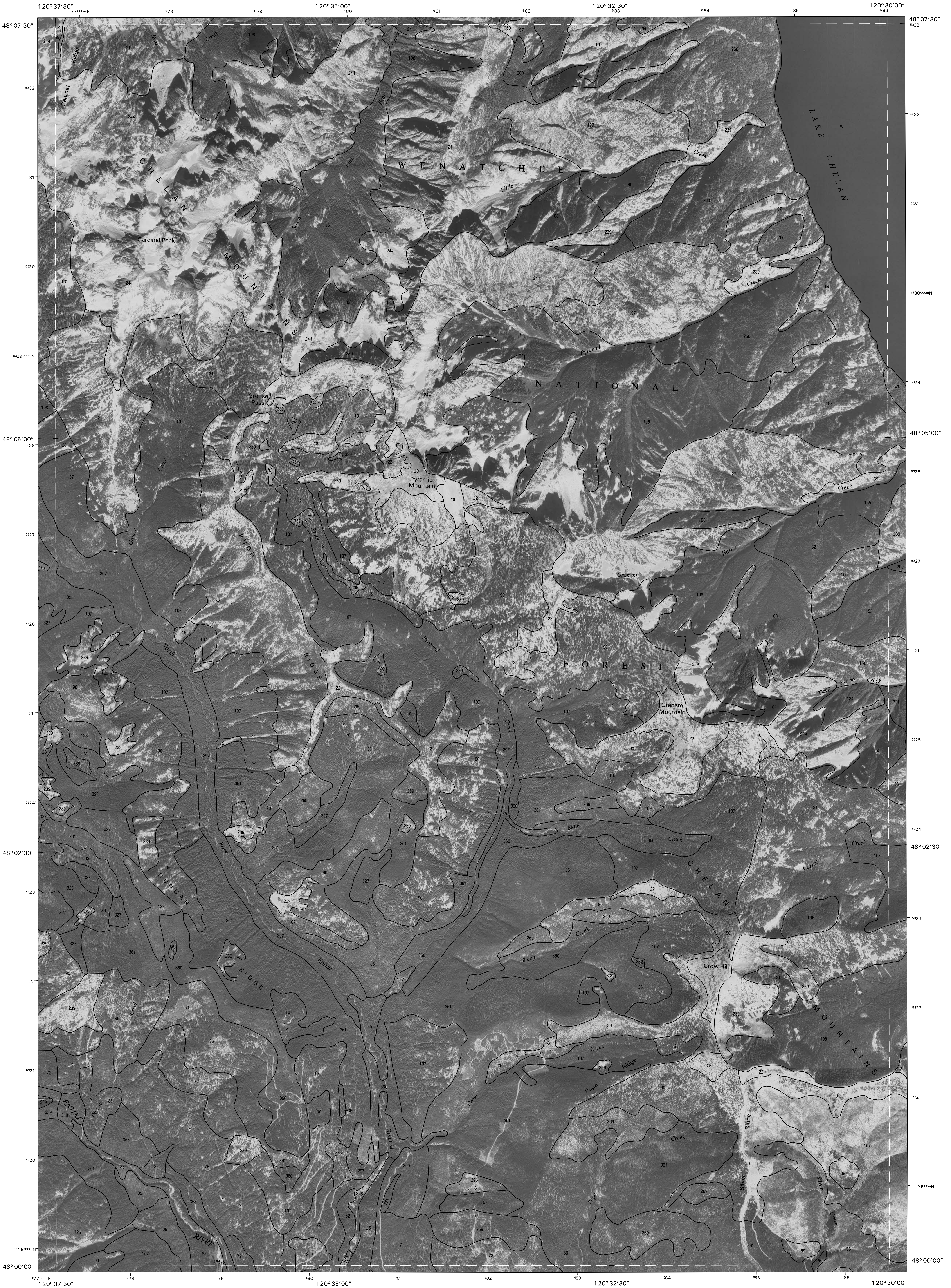
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
PYRAMID MOUNTAIN QUADRANGLE
SHEET NUMBER 21 OF 70



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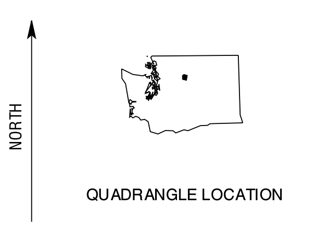

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

1	2	3
4		5
6	7	8

1 PINNACLE MOUNTAIN (SHEET 12)
2 LUCERNE (SHEET 13)
3 PRINCE CREEK (SHEET 14)
4 SASKA PEAK (SHEET 20)
5 BIG GOAT MOUNTAIN (SHEET 22)
6 CHIKAMIN CREEK (SHEET 31)
7 SILVER FALLS (SHEET 32)
8 BRIEF (SHEET 33)

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PYRAMID MOUNTAIN, WASHINGTON

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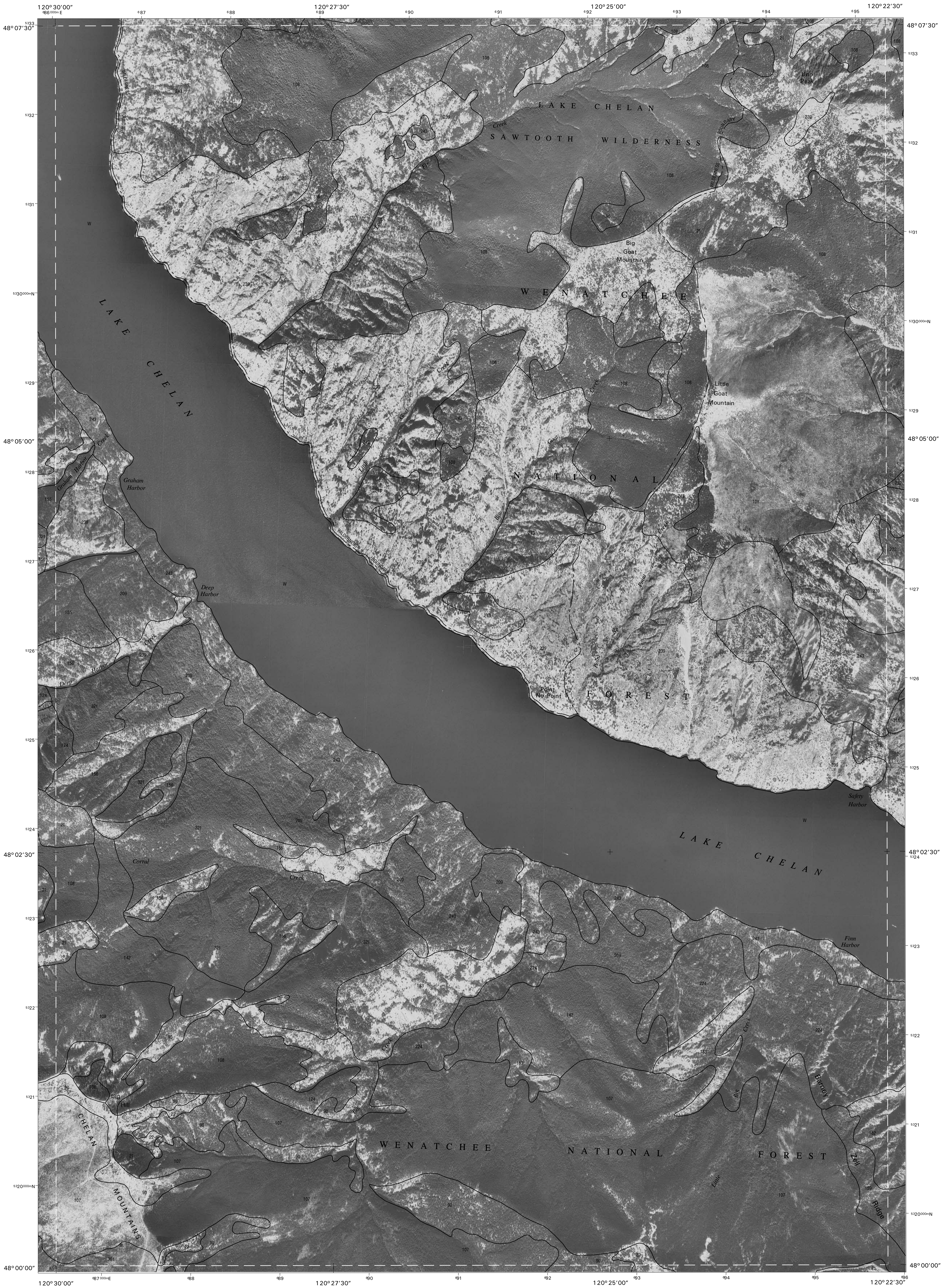
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
BIG GOAT MOUNTAIN QUADRANGLE
SHEET NUMBER 22 OF 70



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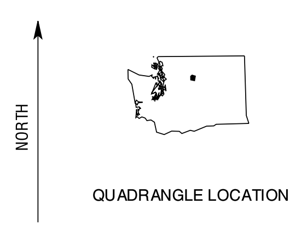

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

1	2	3
4		5
6	7	8

1 LUCERNE (SHEET 13)
2 PRINCE CREEK (SHEET 14)
3 MARTIN PEAK (SHEET 15)
4 PYRAMID MOUNTAIN (SHEET 21)
5 SOUTH NAVARRE PEAK (SHEET 23)
6 SILVER FALLS (SHEET 32)
7 BRIEF (SHEET 33)
8 STORMY MOUNTAIN (SHEET 34)

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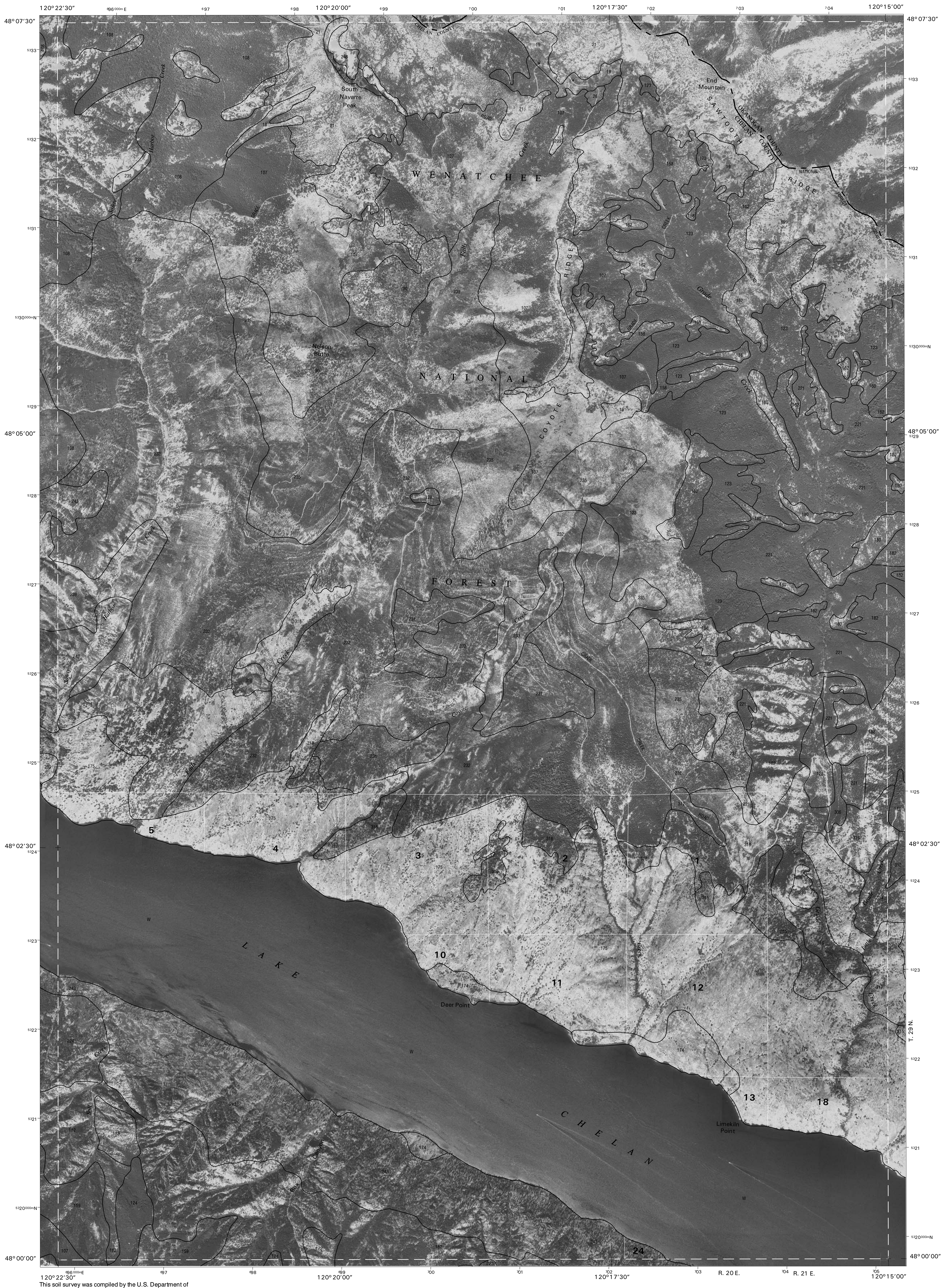
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
SOUTH NAVARRE PEAK QUADRANGLE
SHEET NUMBER 23 OF 70



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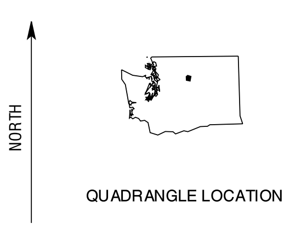
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

1	2	3
4		5
6	7	8

1 PRINCE CREEK (SHEET 14)
2 MARTIN PEAK (SHEET 15)
3 HUNGRY MOUNTAIN
4 BIG GOAT MOUNTAIN (SHEET 22)
5 OSS PEAK (SHEET 24)
6 BRIEF (SHEET 33)
7 STORMY MOUNTAIN (SHEET 34)
8 MANSON (SHEET 35)

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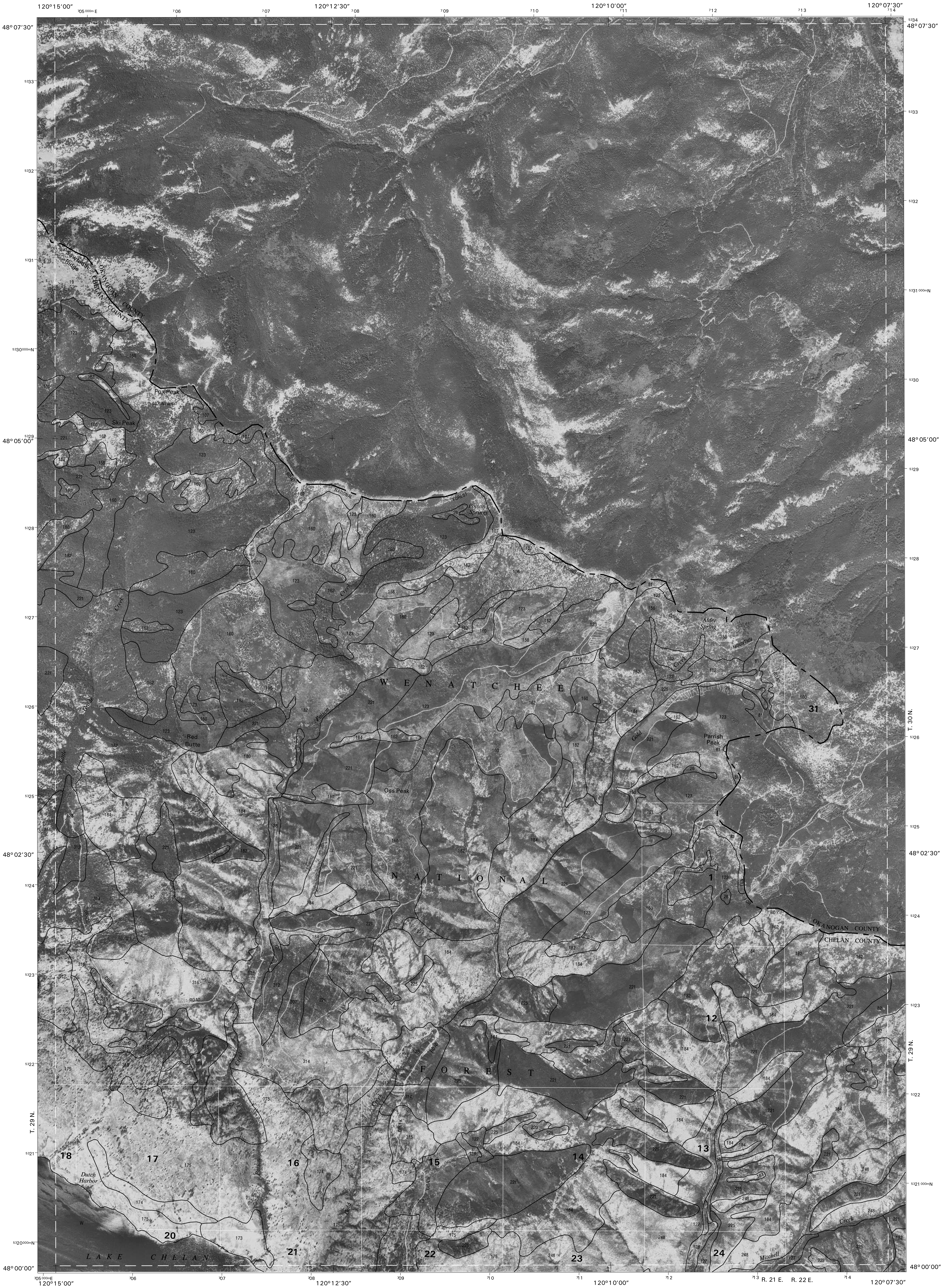
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
OSS PEAK QUADRANGLE
SHEET NUMBER 24 OF 70



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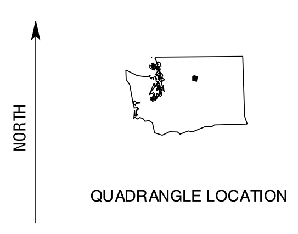
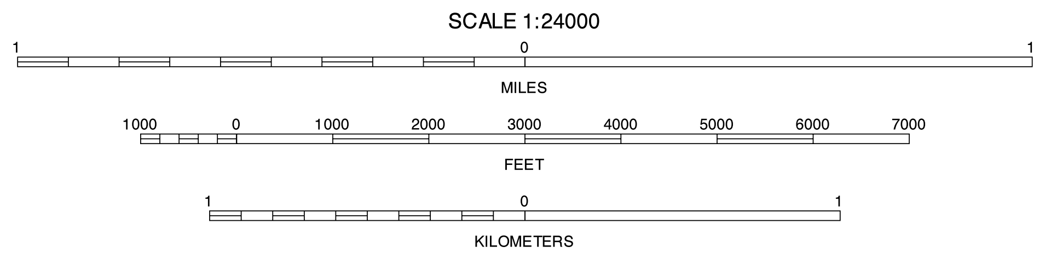
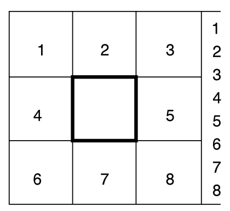
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION





1 MARTIN PEAK (SHEET 15)
2 HUNGRY MOUNTAIN
3 METHOW
4 SOUTH NAVARRE PEAK (SHEET 23)
5 COOPER MOUNTAIN (SHEET 25)
6 STORMY MOUNTAIN (SHEET 34)
7 MANSON (SHEET 35)
8 COOPER RIDGE (SHEET 36)

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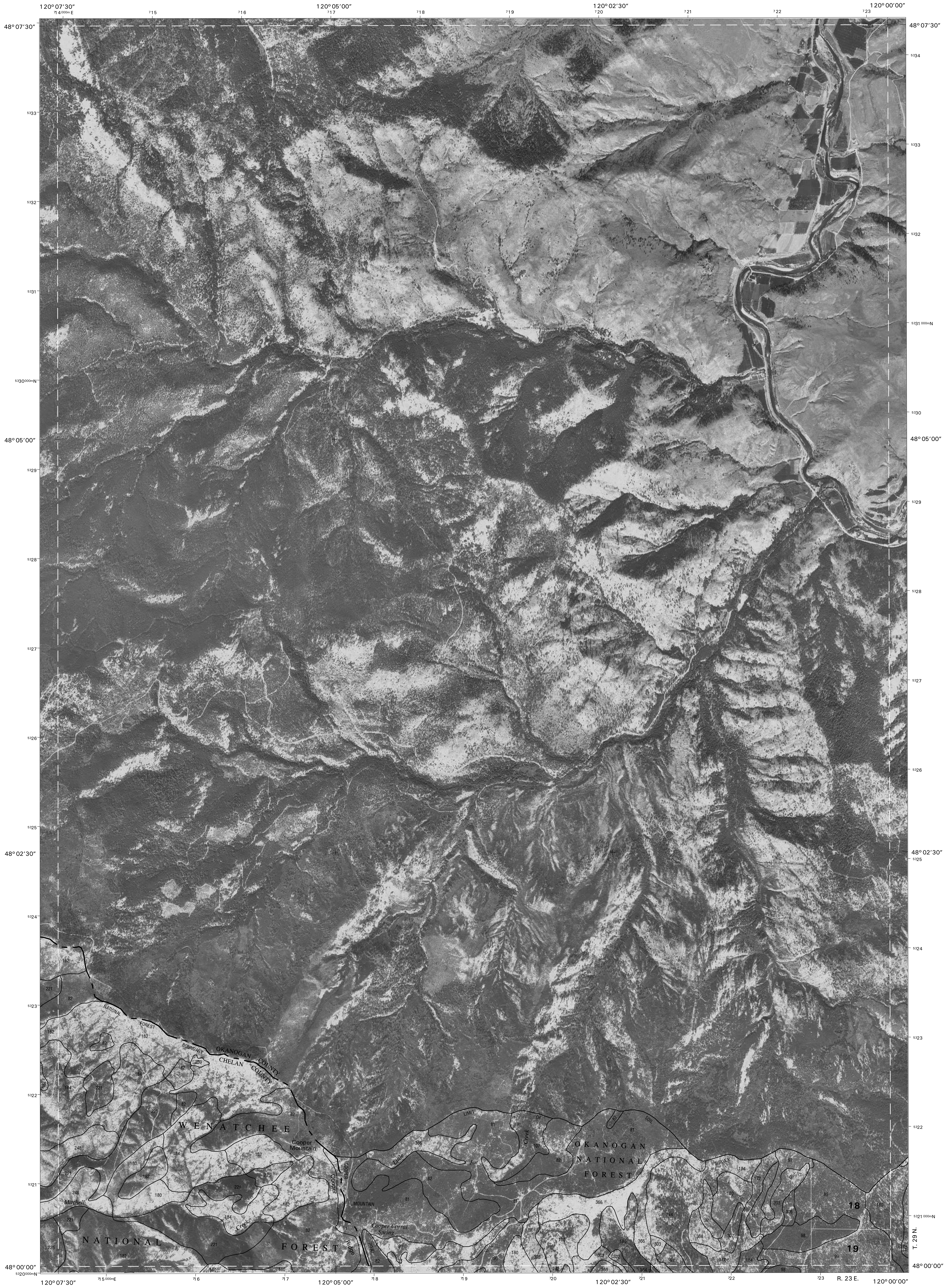
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
COOPER MOUNTAIN QUADRANGLE
SHEET NUMBER 25 OF 70



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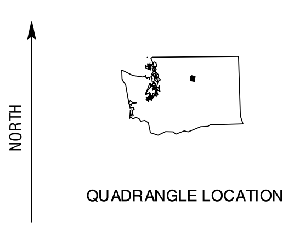

QUADRANGLE LOCATION

SCALE 1:24000

1	2	3
4		5
6	7	8

1 HUNGRY MOUNTAIN
2 METHOW
3 KNOWLTON KNOB
4 OSS PEAK (SHEET 24)
5 PATEROS (SHEET 26)
6 MANSON (SHEET 35)
7 COOPER RIDGE (SHEET 36)
8 AZWELL (SHEET 37)

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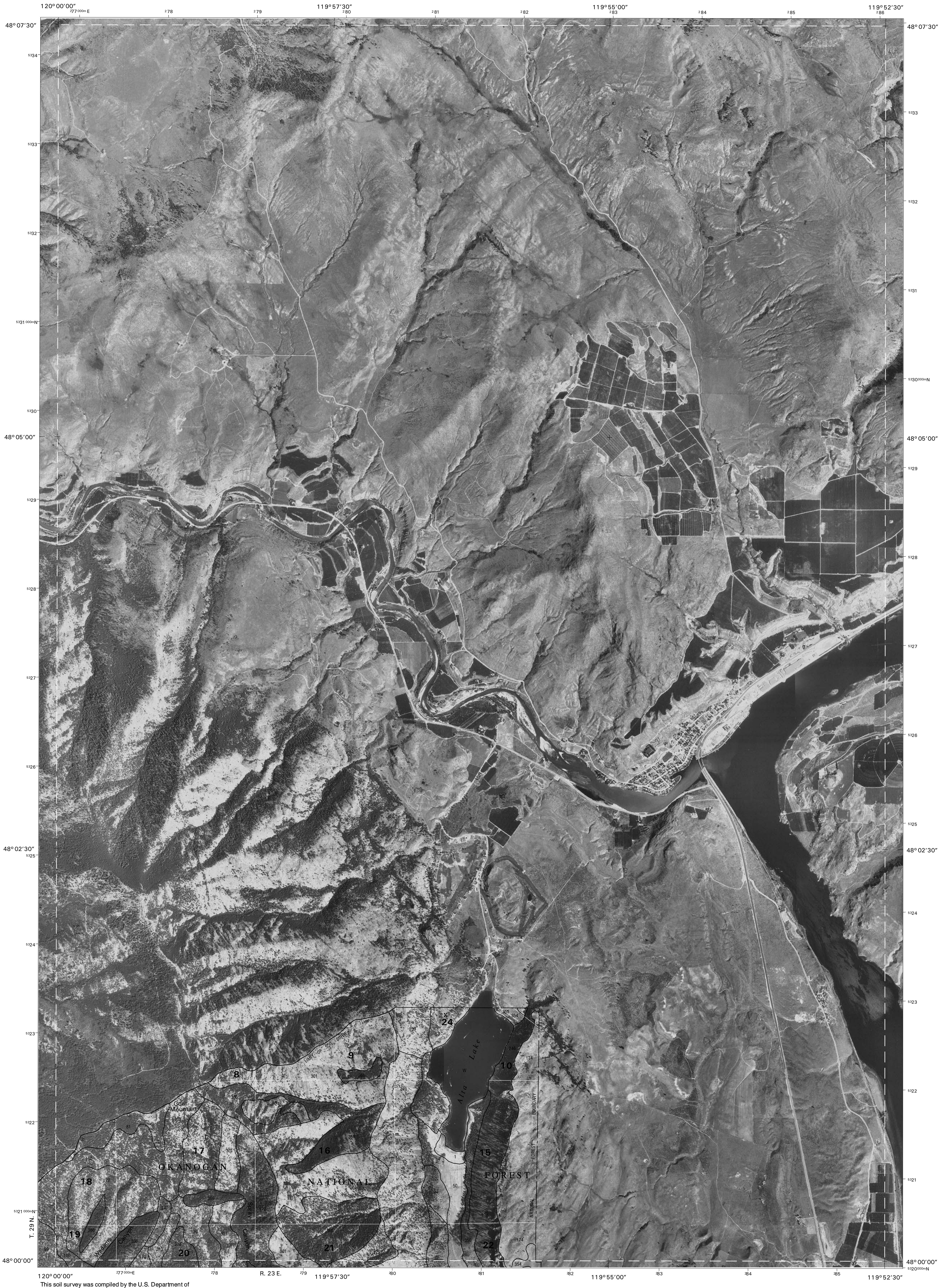
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
PATEROS QUADRANGLE
SHEET NUMBER 26 OF 70



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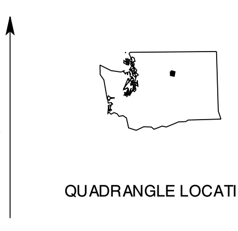
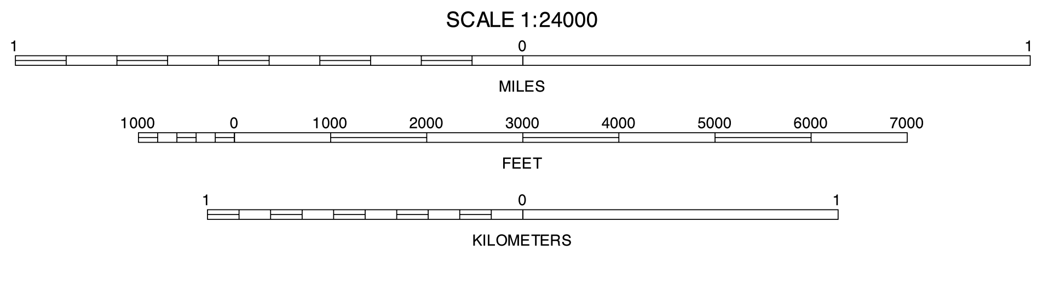
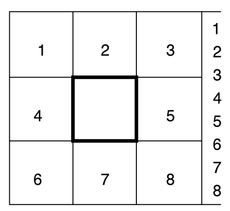
North American Datum of 1983 (NAD83). GRS - 80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.
Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000





1 METHOW
2 KNOWLTON KNOB
3 RAT LAKE
4 COOPER MOUNTAIN (SHEET 25)
5 BREWSTER
6 COOPER RIDGE (SHEET 36)
7 AZWELL (SHEET 37)
8 WELLS DAM

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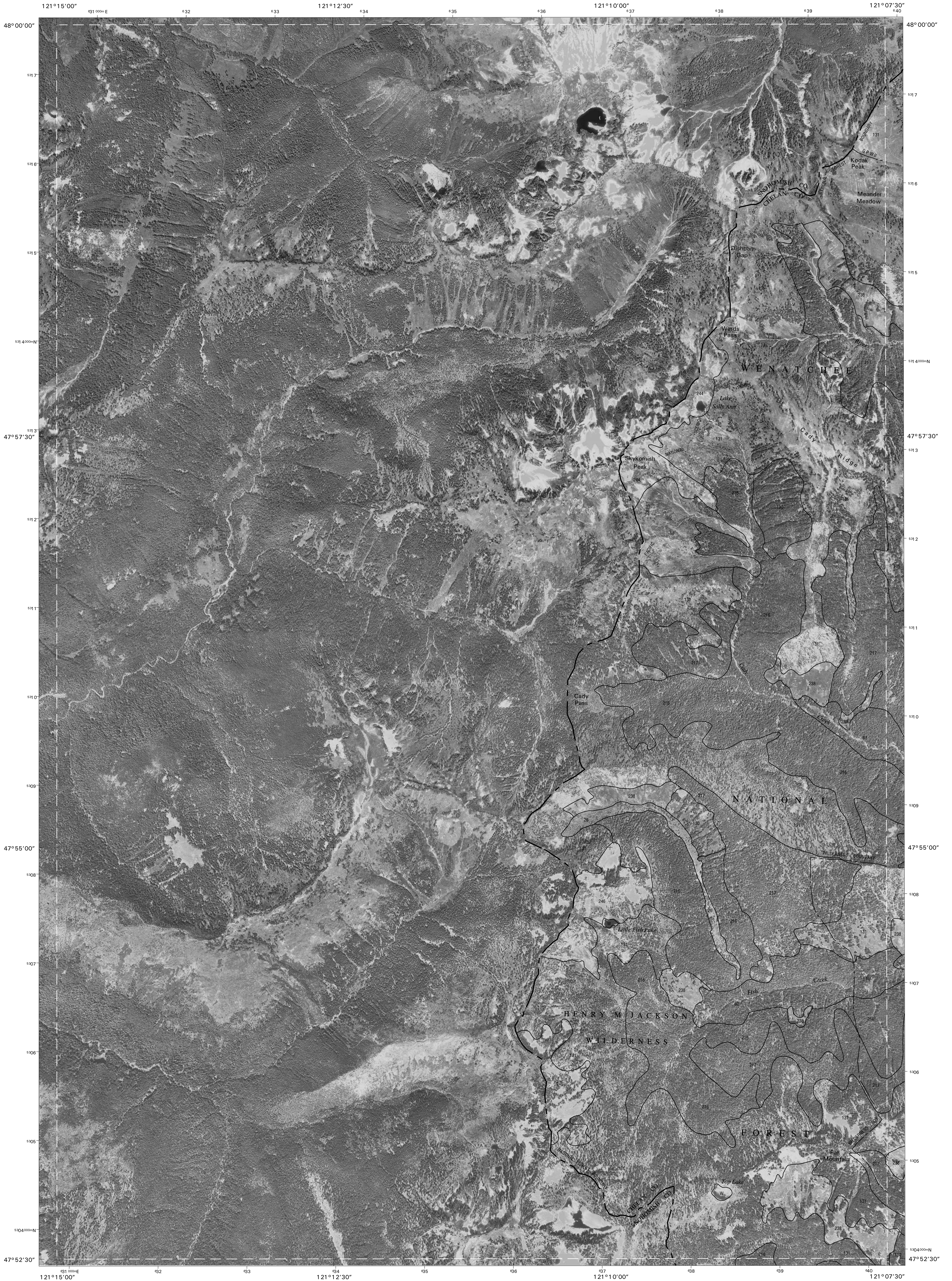
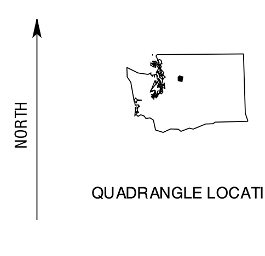
CASHMERE MOUNTAIN AREA, WASHINGTON
BENCHMARK MOUNTAIN QUADRANGLE
SHEET NUMBER 27 OF 70



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1998 aerial photography. Culture was acquired from the USGS. Public land survey system (PLSS) was acquired from Washington Department of Natural Resources. National forest and wilderness boundaries were acquired from the U.S.Department of Agriculture, Forest Service. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



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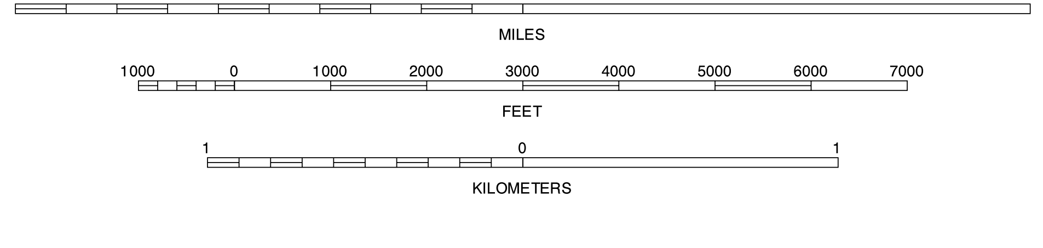

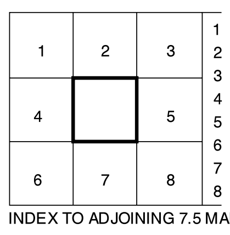

1 SLOAN PEAK
2 GLACIER PEAK WEST (SHEET 16)
3 GLACIER PEAK EAST (SHEET 17)
4 BLANCA LAKE
5 POE MOUNTAIN (SHEET 28)
6 EVERGREEN MOUNTAIN
7 CAPTAIN POINT (SHEET 38)
8 LABYRINTH MOUNTAIN (SHEET 39)

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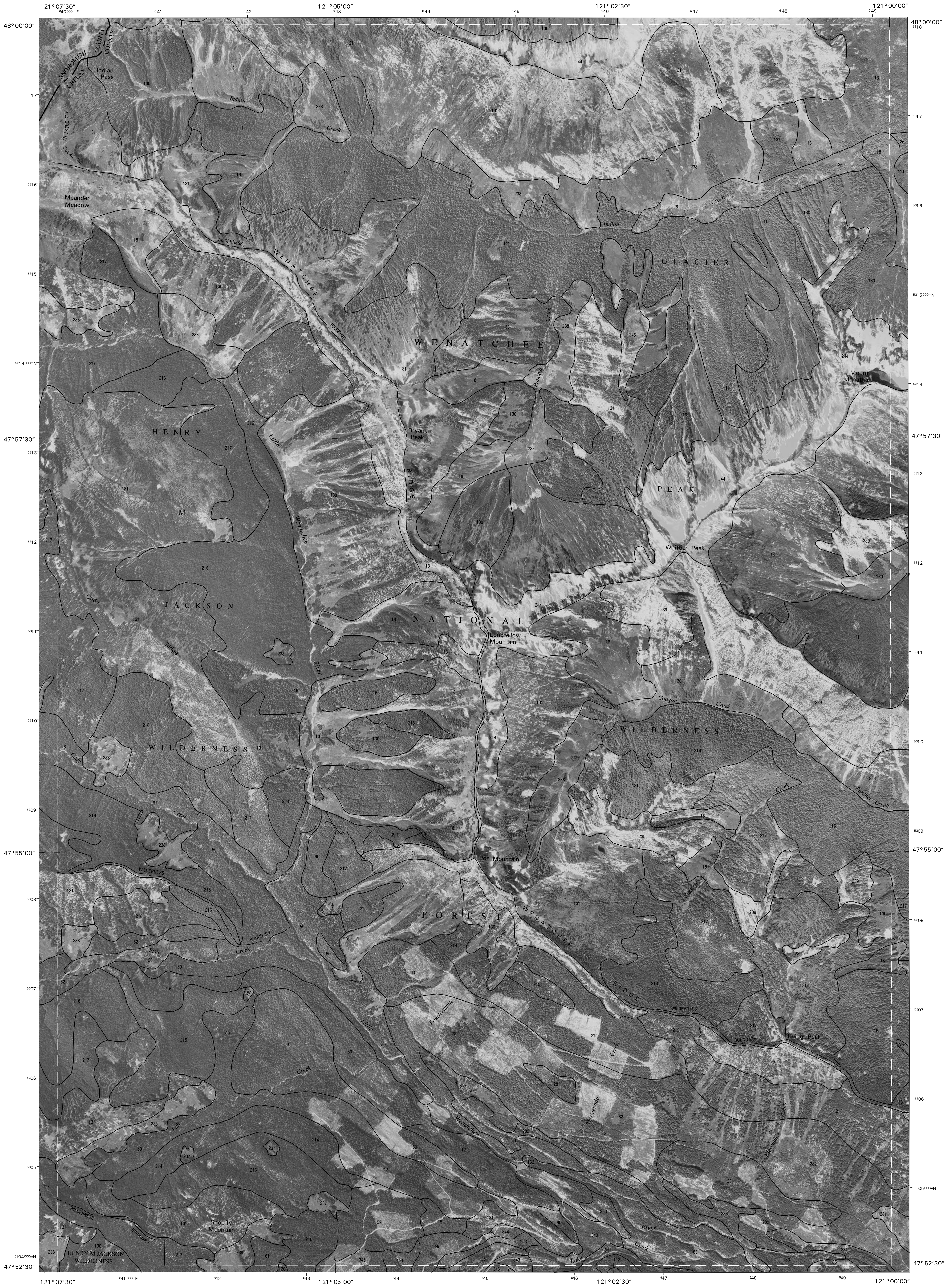
CASHMERE MOUNTAIN AREA, WASHINGTON
POE MOUNTAIN QUADRANGLE
SHEET NUMBER 28 OF 70



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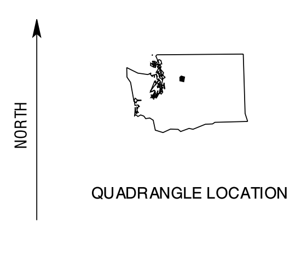

QUADRANGLE LOCATION

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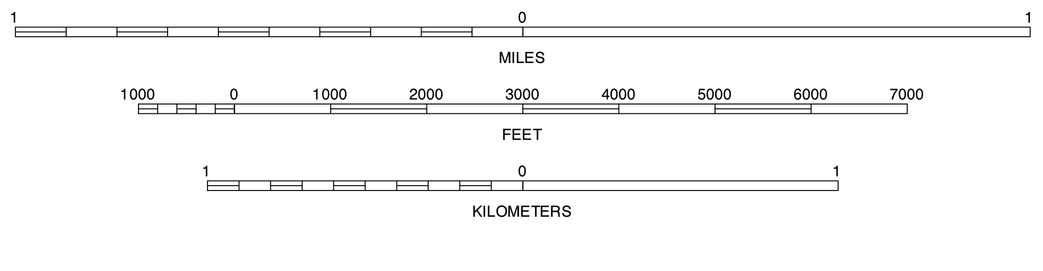

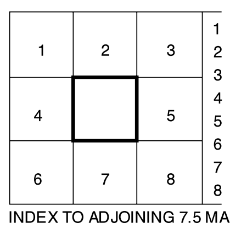

1 GLACIER PEAK WEST (SHEET 16)
2 GLACIER PEAK EAST (SHEET 17)
3 CLARK MOUNTAIN (SHEET 18)
4 BENCHMARK MOUNTAIN (SHEET 27)
5 MOUNT DAVID (SHEET 29)
6 CAPTAIN POINT (SHEET 38)
7 LABYRINTH MOUNTAIN (SHEET 39)
8 MOUNT HOWARD (SHEET 40)

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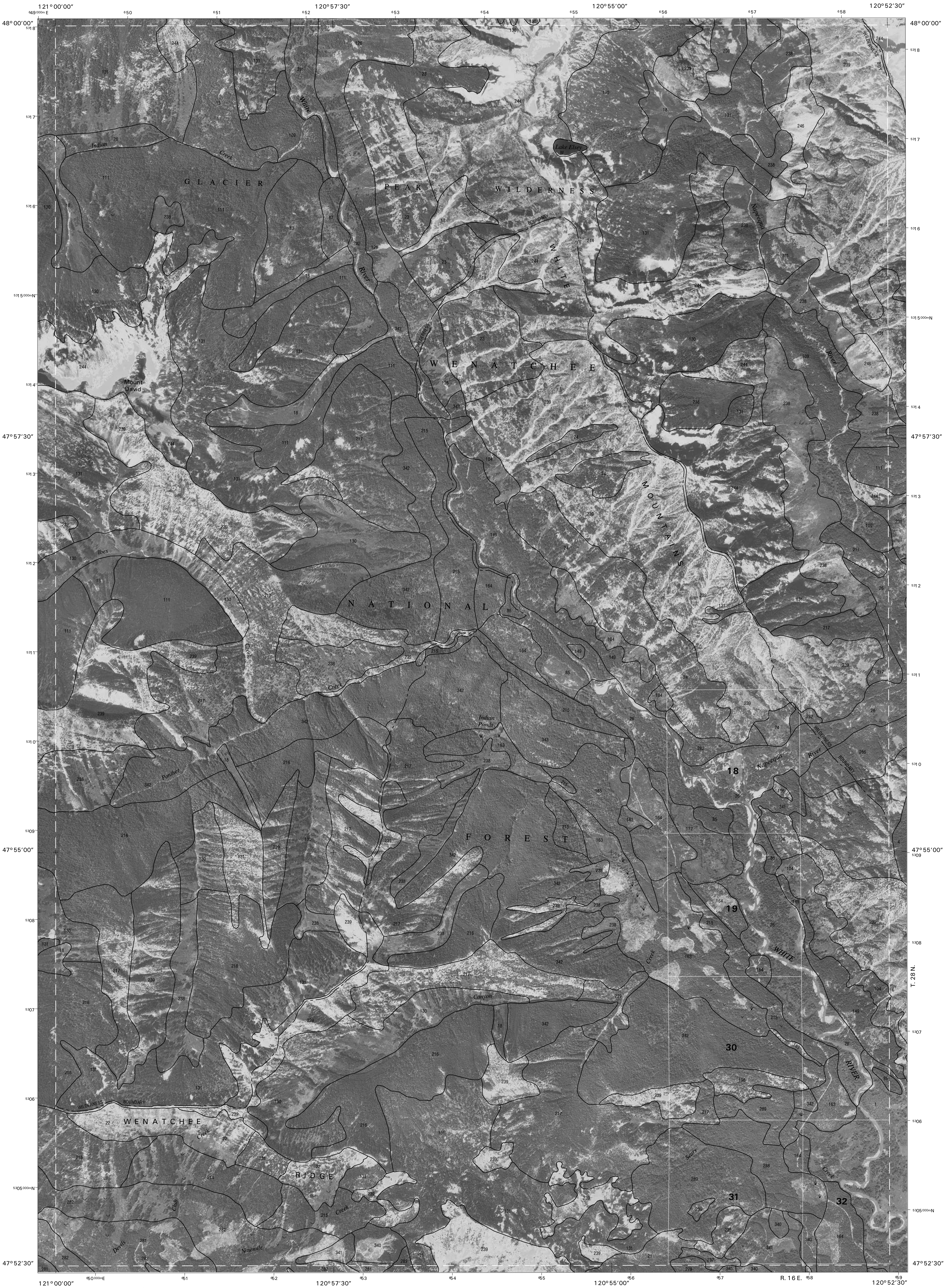
CASHMERE MOUNTAIN AREA, WASHINGTON
MOUNT DAVID QUADRANGLE
SHEET NUMBER 29 OF 70



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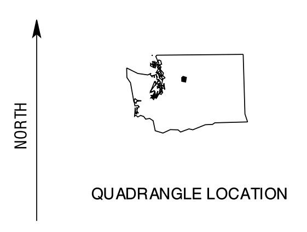

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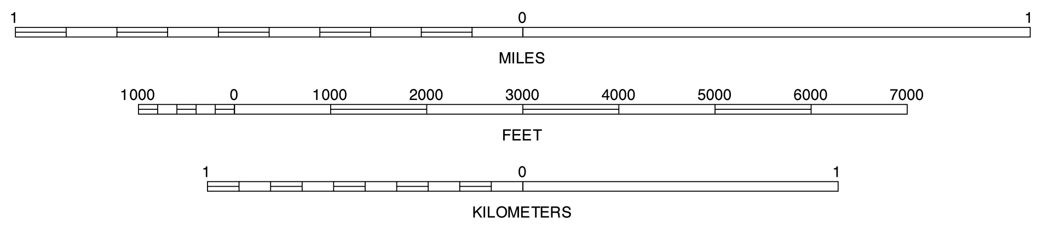

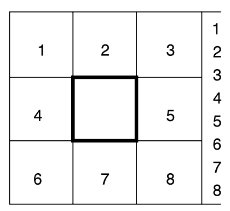

1 GLACIER PEAK EAST (SHEET 17)
2 CLARK MOUNTAIN (SHEET 18)
3 TRINITY (SHEET 19)
4 POE MOUNTAIN (SHEET 28)
5 SCHAEFER LAKE (SHEET 30)
6 LABYRINTH MOUNTAIN (SHEET 39)
7 MOUNT HOWARD (SHEET 40)
8 LAKE WENATCHEE (SHEET 41)

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CASHMERE MOUNTAIN AREA, WASHINGTON
SCHAEFER LAKE QUADRANGLE
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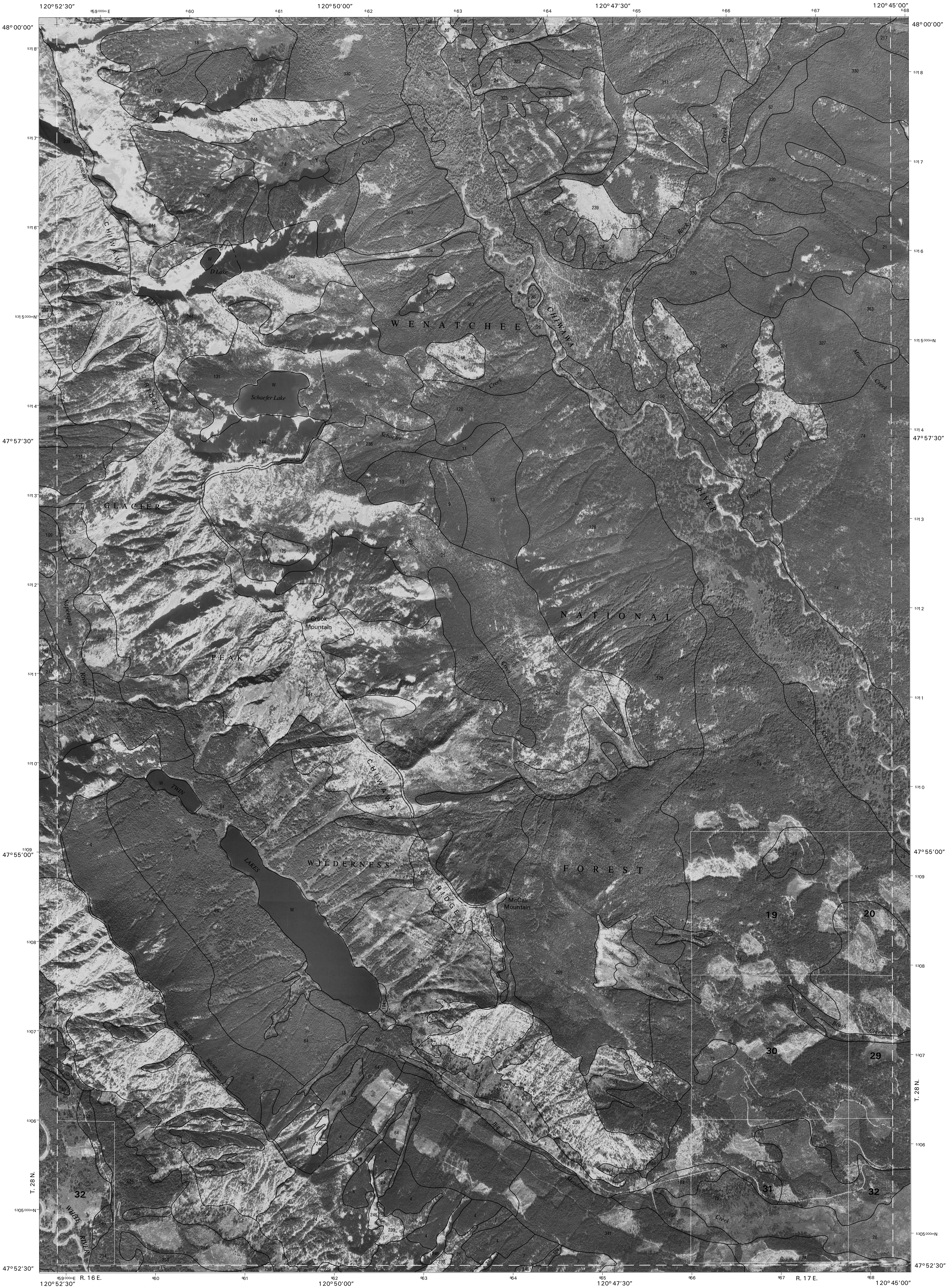

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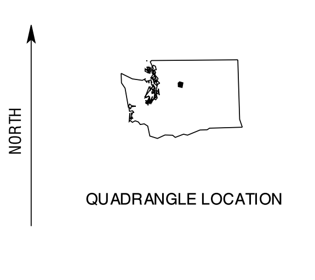

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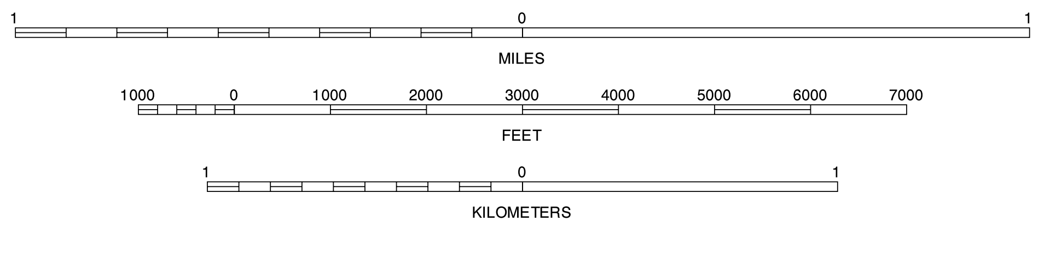

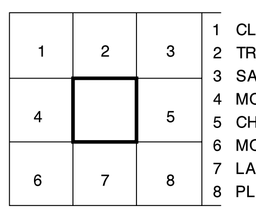

1 CLARK MOUNTAIN (SHEET 18)
2 TRINITY (SHEET 19)
3 SASKA PEAK (SHEET 20)
4 MOUNT DAVID (SHEET 29)
5 CHIKAMIN CREEK (SHEET 31)
6 MOUNT HOWARD (SHEET 40)
7 LAKE WENATCHEE (SHEET 41)
8 PLAIN (SHEET 42)

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CASHMERE MOUNTAIN AREA, WASHINGTON
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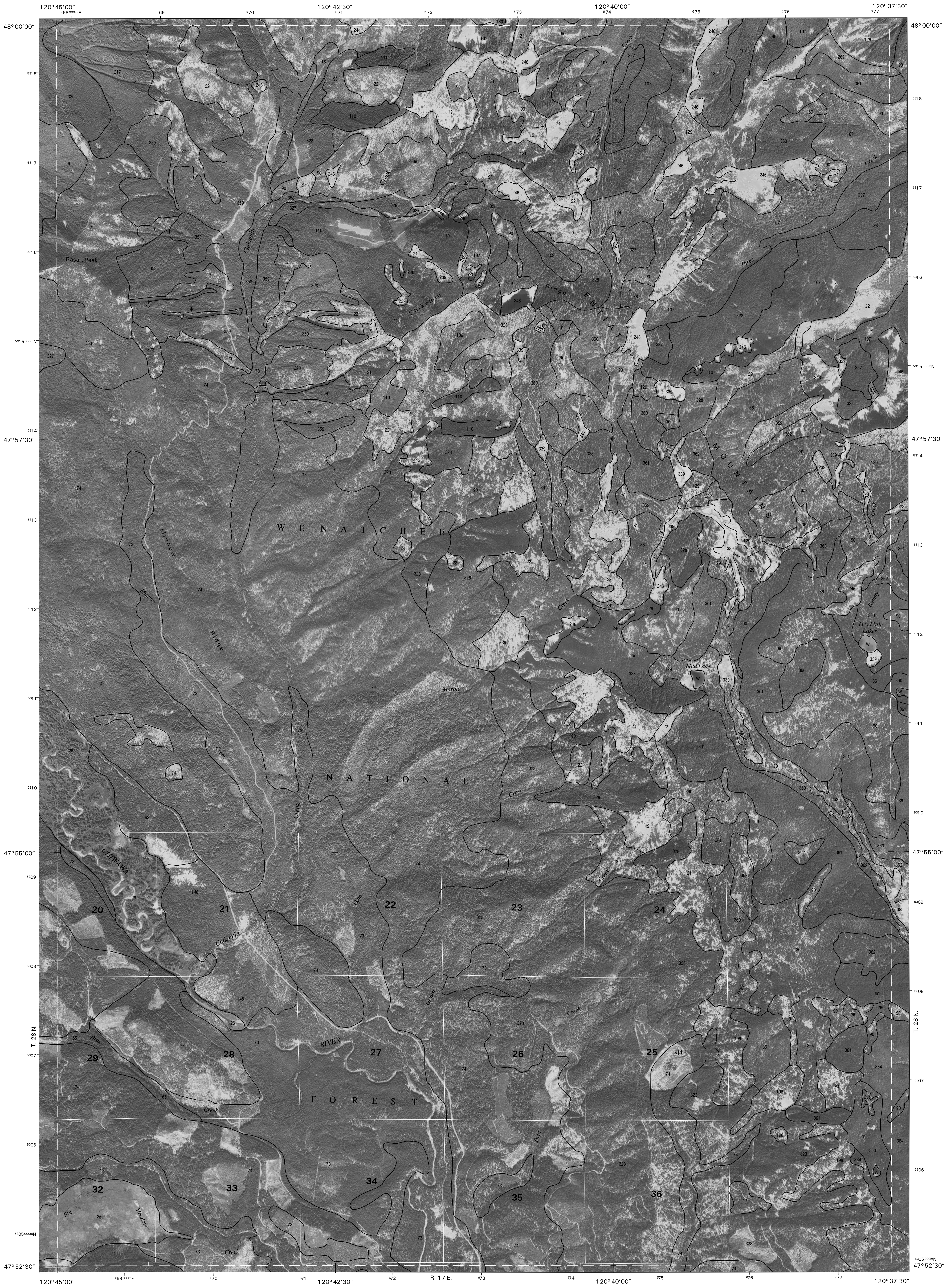

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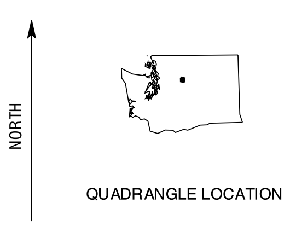

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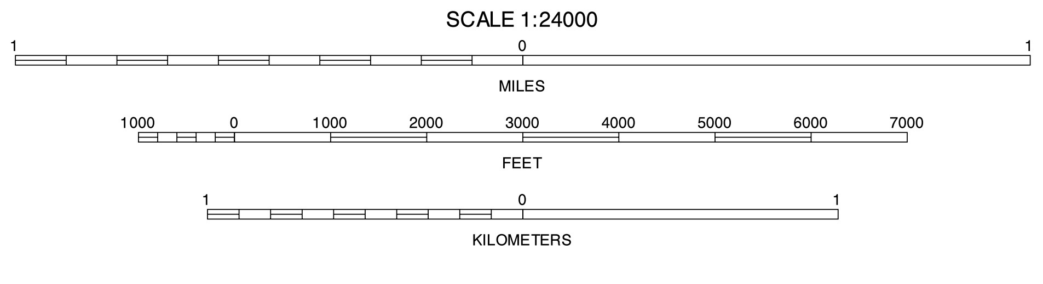

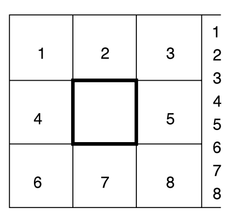

1 TRINITY (SHEET 19)
2 SASKA PEAK (SHEET 20)
3 PYRAMID MOUNTAIN (SHEET 21)
4 SCHAEFER LAKE (SHEET 30)
5 SILVER FALLS (SHEET 32)
6 LAKE WENATCHEE (SHEET 41)
7 PLAIN (SHEET 42)
8 SUGARLOAF PEAK (SHEET 43)

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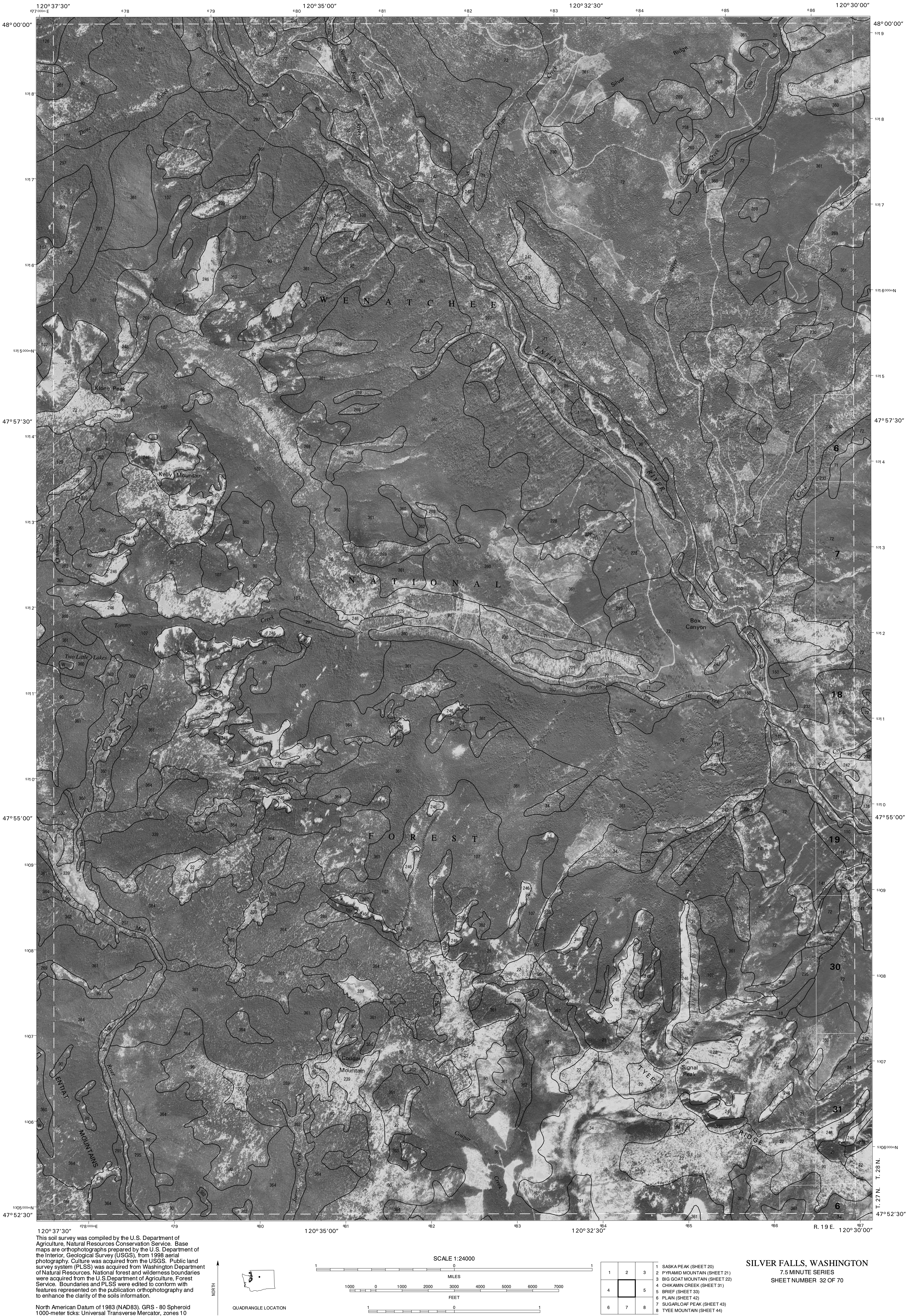
CASHMERE MOUNTAIN AREA, WASHINGTON
SILVER FALLS QUADRANGLE
SHEET NUMBER 32 OF 70



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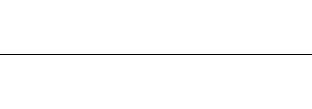

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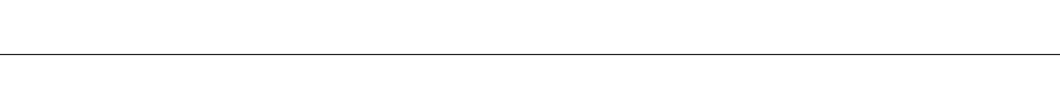
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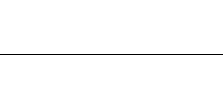

1 SASKA PEAK (SHEET 20)
2 PYRAMID MOUNTAIN (SHEET 21)
3 BIG GOAT MOUNTAIN (SHEET 22)
4 CHIKAMIN CREEK (SHEET 31)
5 BRIEF (SHEET 33)
6 PLAIN (SHEET 42)
7 SUGARLOAF PEAK (SHEET 43)
8 TYEE MOUNTAIN (SHEET 44)

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CASHMERE MOUNTAIN AREA, WASHINGTON
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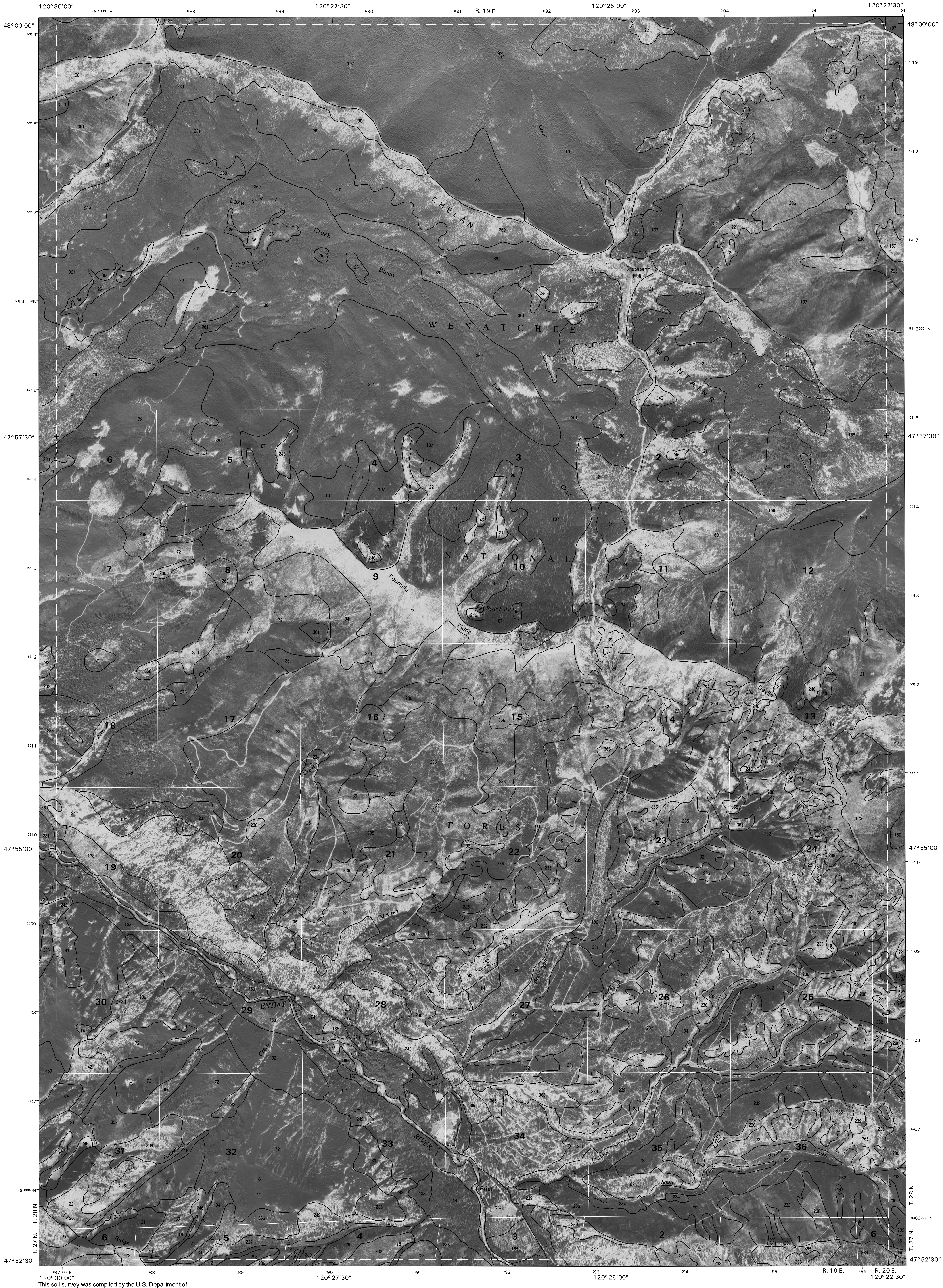

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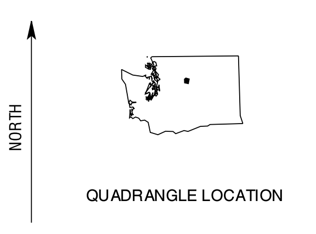

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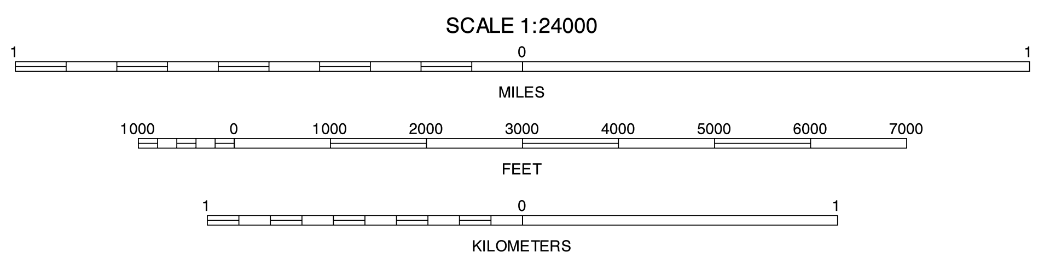

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1 PYRAMID MOUNTAIN (SHEET 21)
2 BIG GOAT MOUNTAIN (SHEET 22)
3 SOUTH NAVARRE PEAK (SHEET 23)
4 SILVER FALLS (SHEET 32)
5 STORMY MOUNTAIN (SHEET 34)
6 SUGARLOAF PEAK (SHEET 43)
7 TYEE MOUNTAIN (SHEET 44)
8 BALDY MOUNTAIN (SHEET 45)

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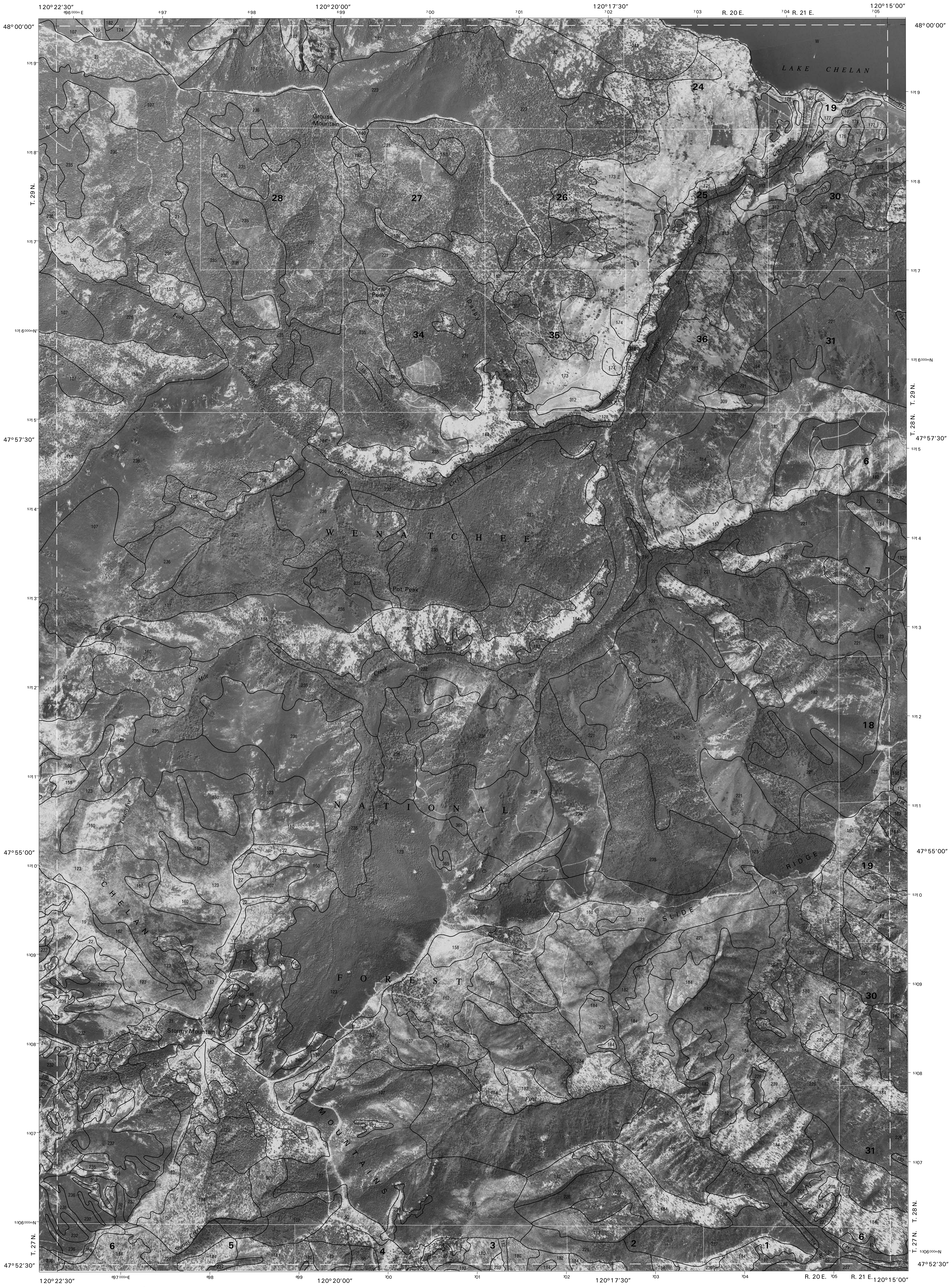

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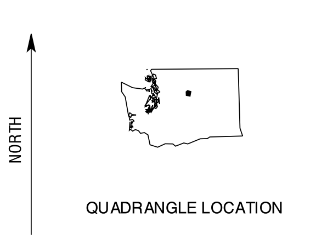

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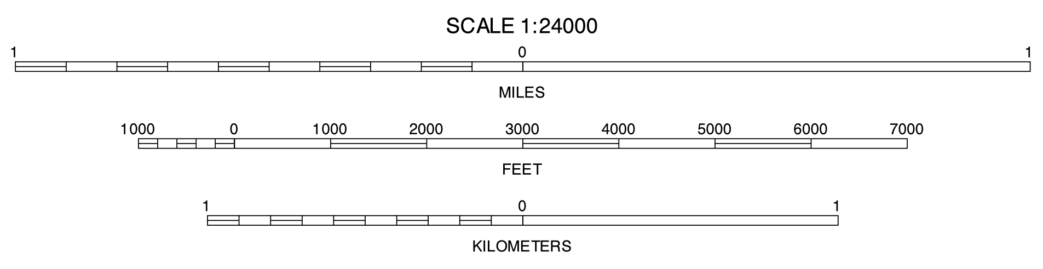

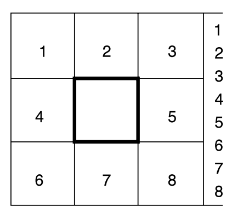

1 BIG GOAT MOUNTAIN (SHEET 22)
2 SOUTH NAVARRE PEAK (SHEET 23)
3 OSS PEAK (SHEET 24)
4 BRIEF (SHEET 33)
5 MANSON (SHEET 35)
6 TYEE MOUNTAIN (SHEET 44)
7 BALDY MOUNTAIN (SHEET 45)
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CASHMERE MOUNTAIN AREA, WASHINGTON
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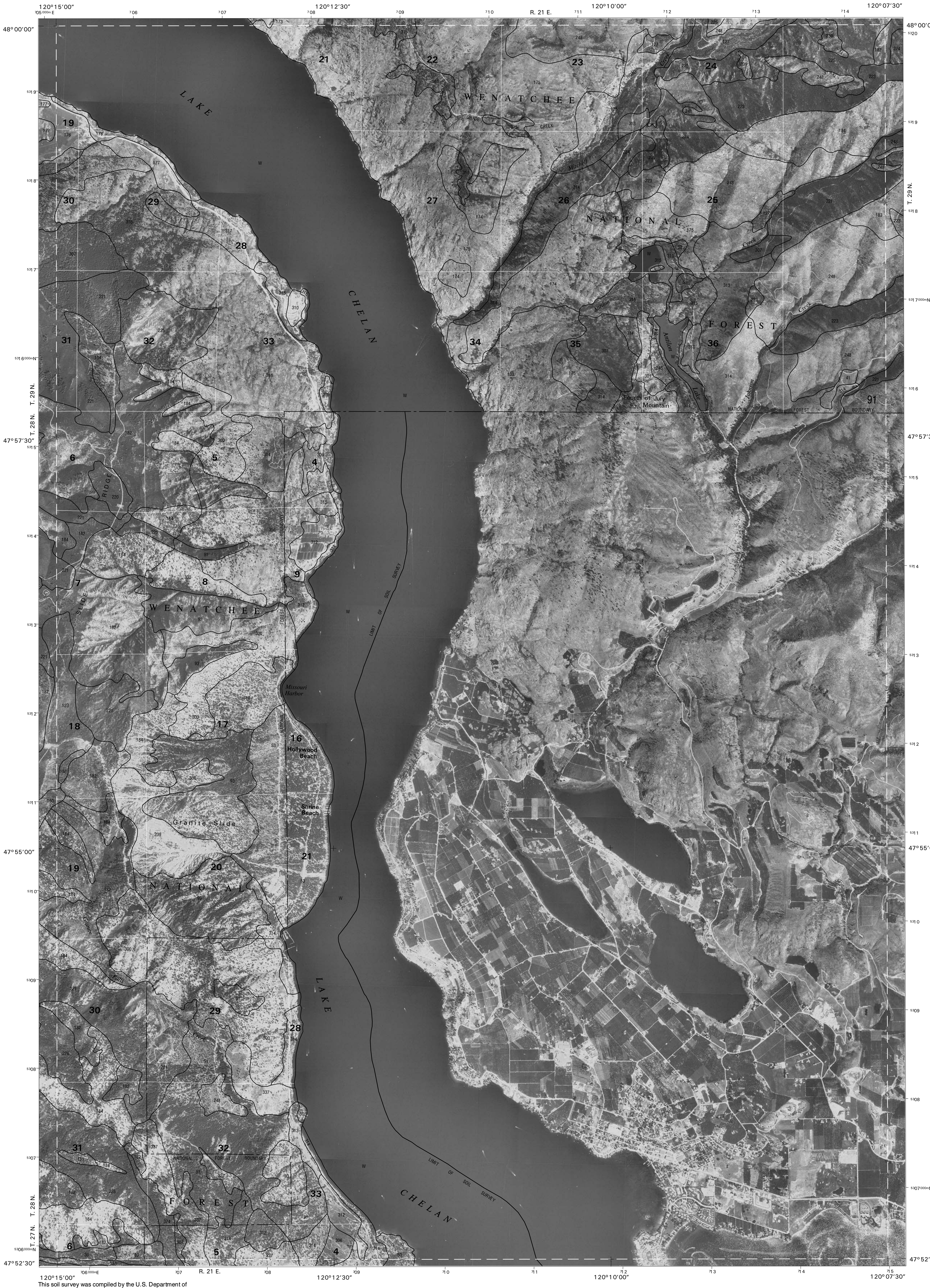

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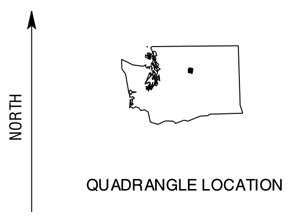

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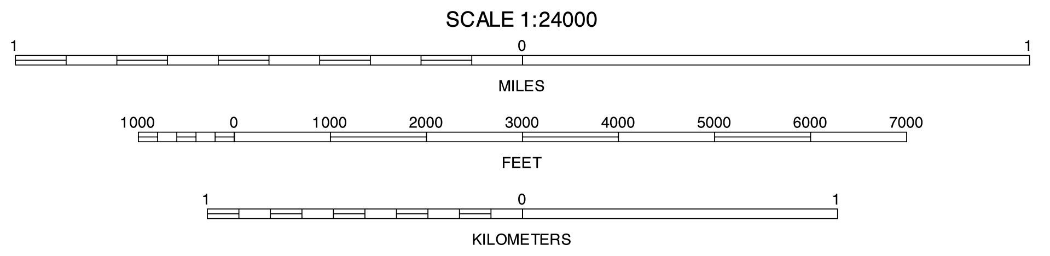

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1 SOUTH NAVARRE PEAK (SHEET 23)
2 OSS PEAK (SHEET 24)
3 COOPER MOUNTAIN (SHEET 25)
4 STORMY MOUNTAIN (SHEET 34)
5 COOPER RIDGE (SHEET 36)
6 BALDY MOUNTAIN (SHEET 45)
7 WINESAP (SHEET 46)
8 CHELAN

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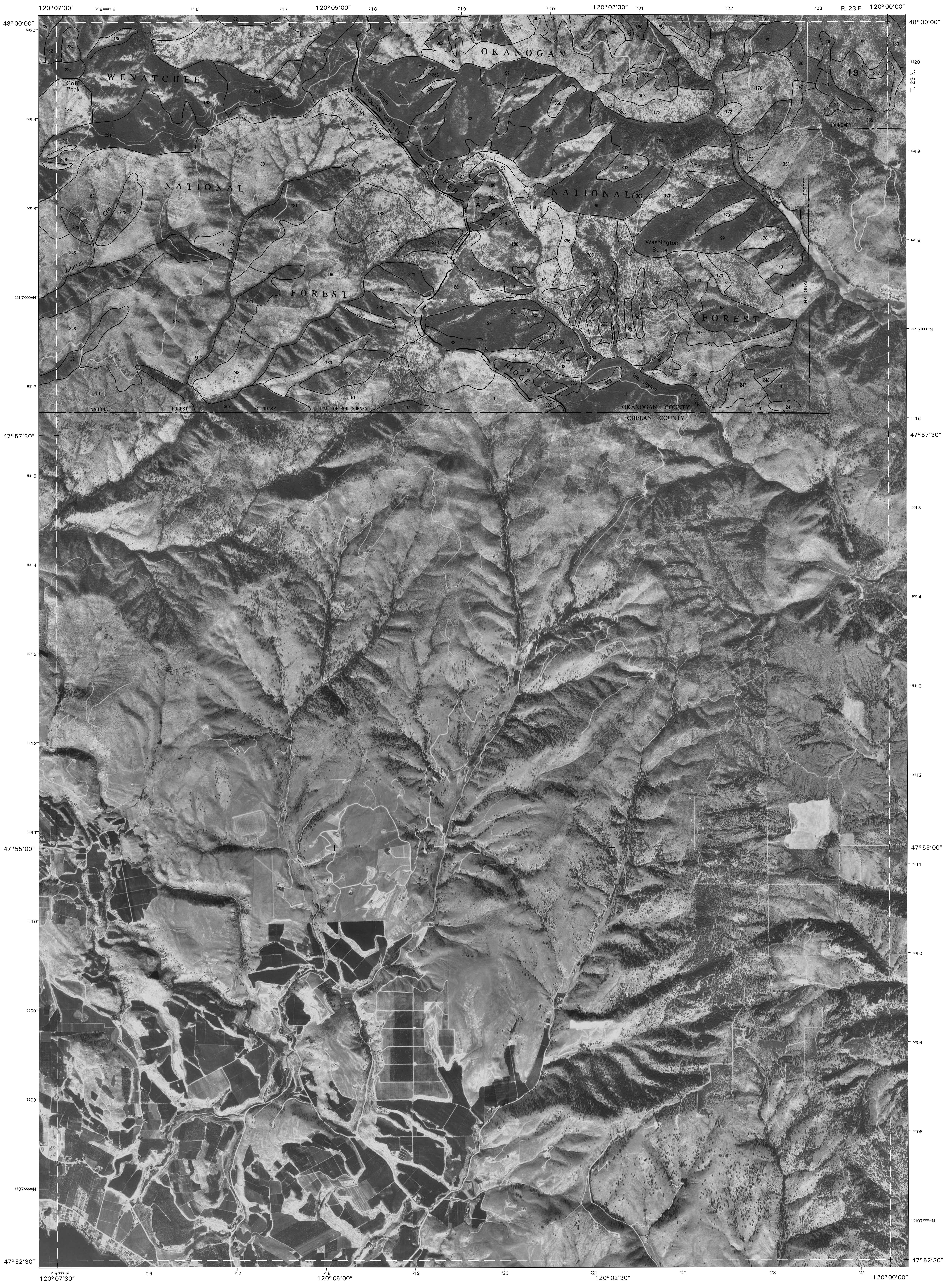
CASHMERE MOUNTAIN AREA, WASHINGTON
COOPER RIDGE QUADRANGLE
SHEET NUMBER 36 OF 70



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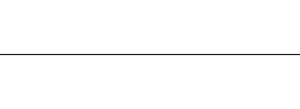

QUADRANGLE LOCATION

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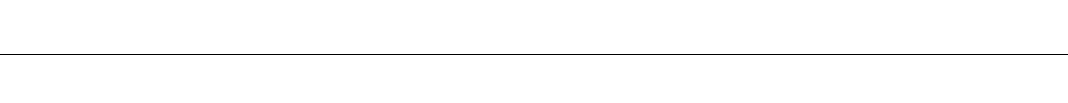

1	2	3
4		5
6	7	8

1 OSS PEAK (SHEET 24)
2 COOPER MOUNTAIN (SHEET 25)
3 PATEROS (SHEET 26)
4 MANSON (SHEET 35)
5 AZWELL (SHEET 37)
6 WINESAP (SHEET 46)
7 CHELAN
8 CHELAN FALLS

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UNITED STATES
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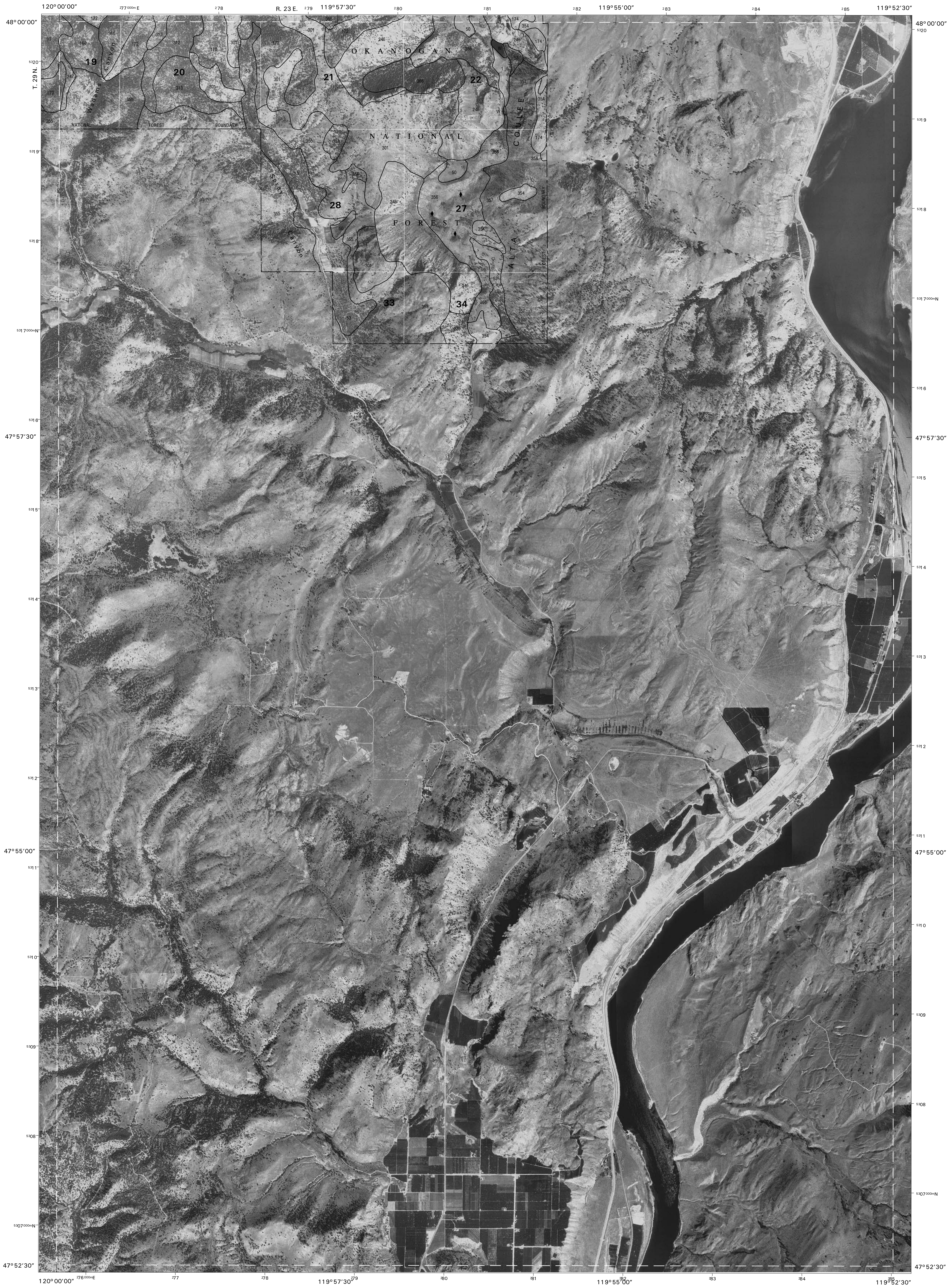
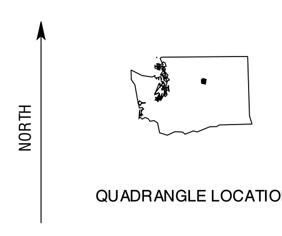
CASHMERE MOUNTAIN AREA, WASHINGTON
AZWELL QUADRANGLE
SHEET NUMBER 37 OF 70



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1998 aerial photography. Culture was acquired from the USGS. Public land survey system (PLSS) was acquired from Washington Department of Natural Resources. National forest and wilderness boundaries were acquired from the U.S.Department of Agriculture, Forest Service. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



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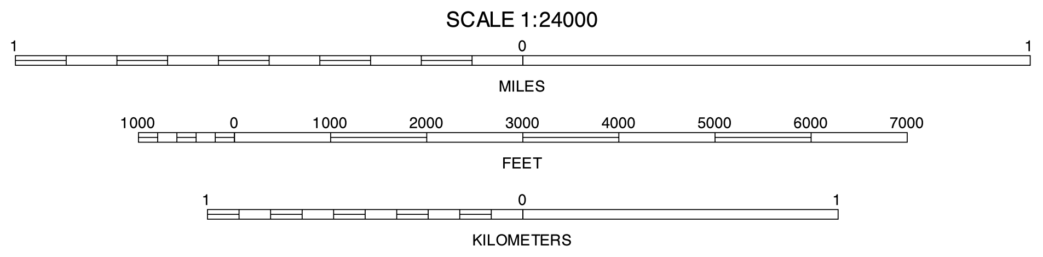

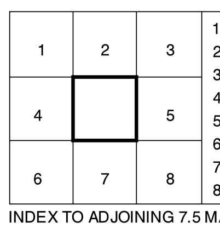

1 COOPER MOUNTAIN (SHEET 25)
2 PATEROS (SHEET 26)
3 BREWSTER
4 COOPER RIDGE (SHEET 36)
5 WELLS DAM
6 CHELAN
7 CHELAN FALLS
8 MUD SPRING

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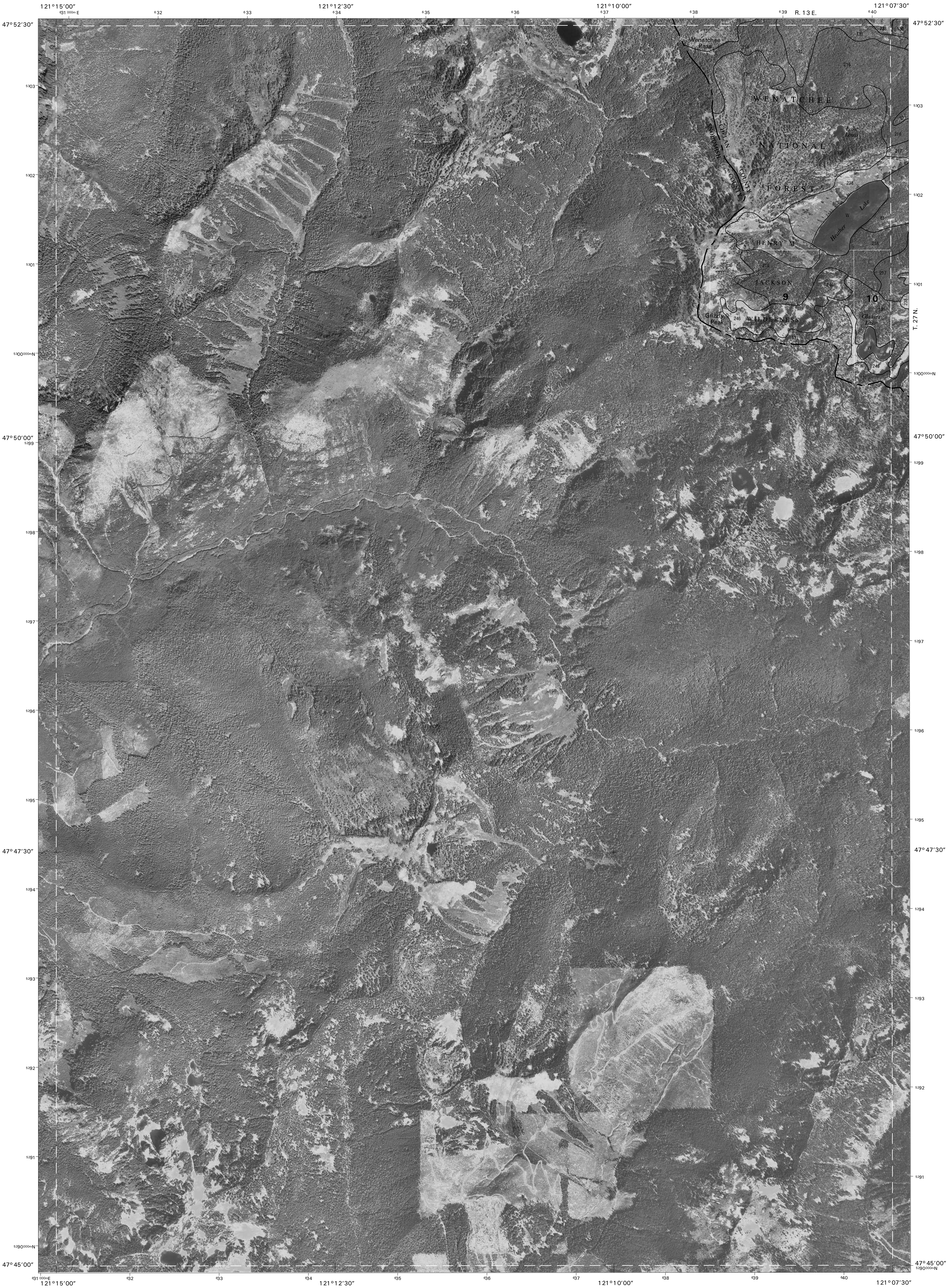
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
CAPTAIN POINT QUADRANGLE
SHEET NUMBER 38 OF 70



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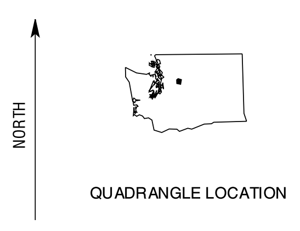

QUADRANGLE LOCATION

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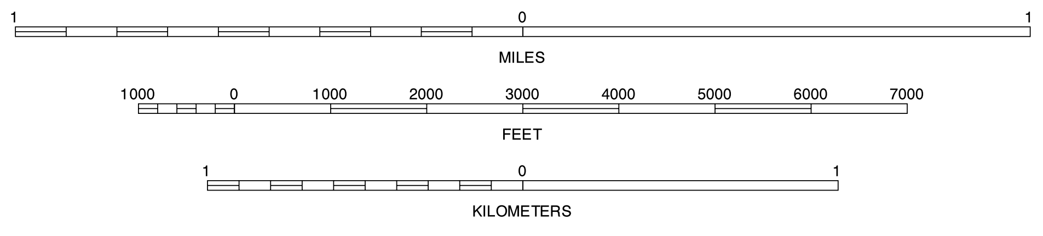

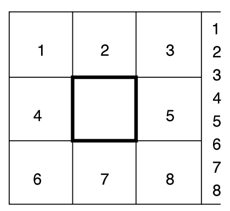

1 BLANCA LAKE
2 BENCHMARK MOUNTAIN (SHEET 27)
3 POE MOUNTAIN (SHEET 28)
4 EVERGREEN MOUNTAIN
5 LABYRINTH MOUNTAIN (SHEET 39)
6 SKYKOMISH
7 SCENIC (SHEET 47)
8 STEVENS PASS (SHEET 48)

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CASHMERE MOUNTAIN AREA, WASHINGTON
LABYRINTH MOUNTAIN QUADRANGLE
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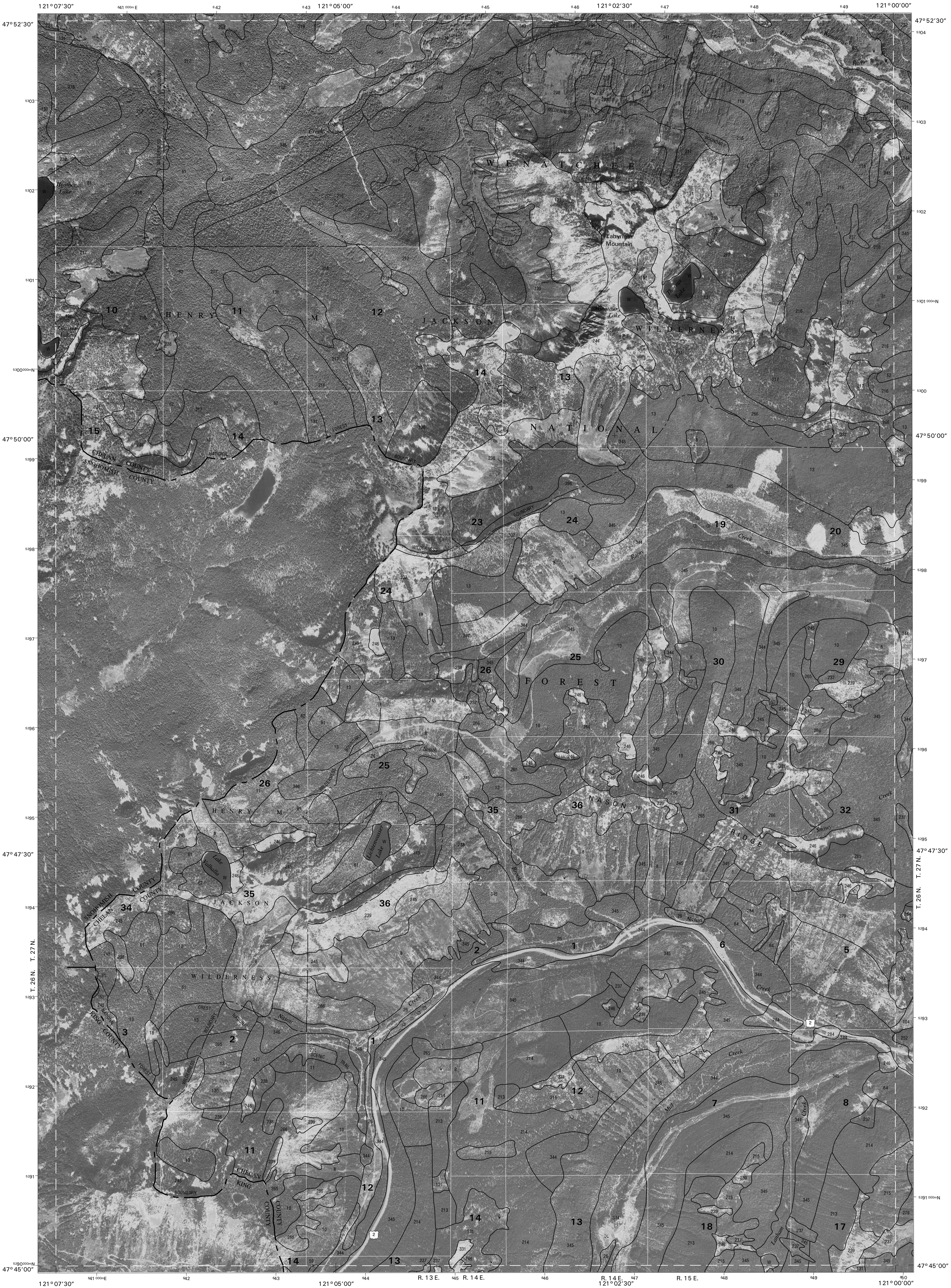

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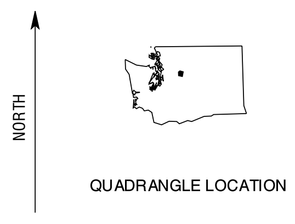

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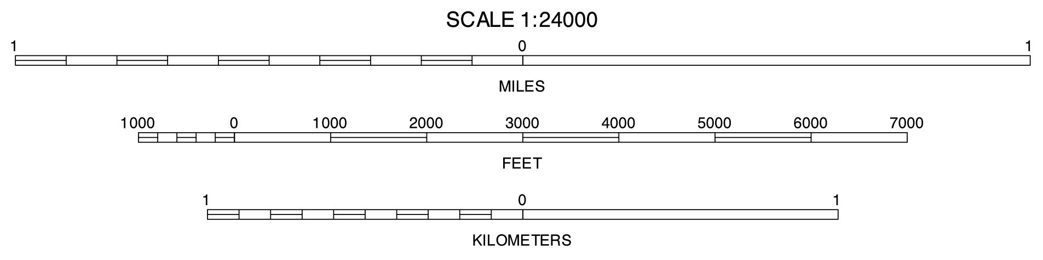

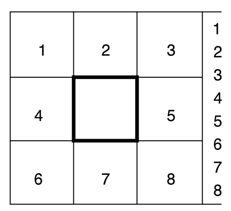

1 BENCHMARK MOUNTAIN (SHEET 27)
2 POE MOUNTAIN (SHEET 28)
3 MOUNT DAVID (SHEET 29)
4 CAPTAIN POINT (SHEET 38)
5 MOUNT HOWARD (SHEET 40)
6 SCENIC (SHEET 47)
7 STEVENS PASS (SHEET 48)
8 CHIWAUKUM MOUNTAINS (SHEET 49)

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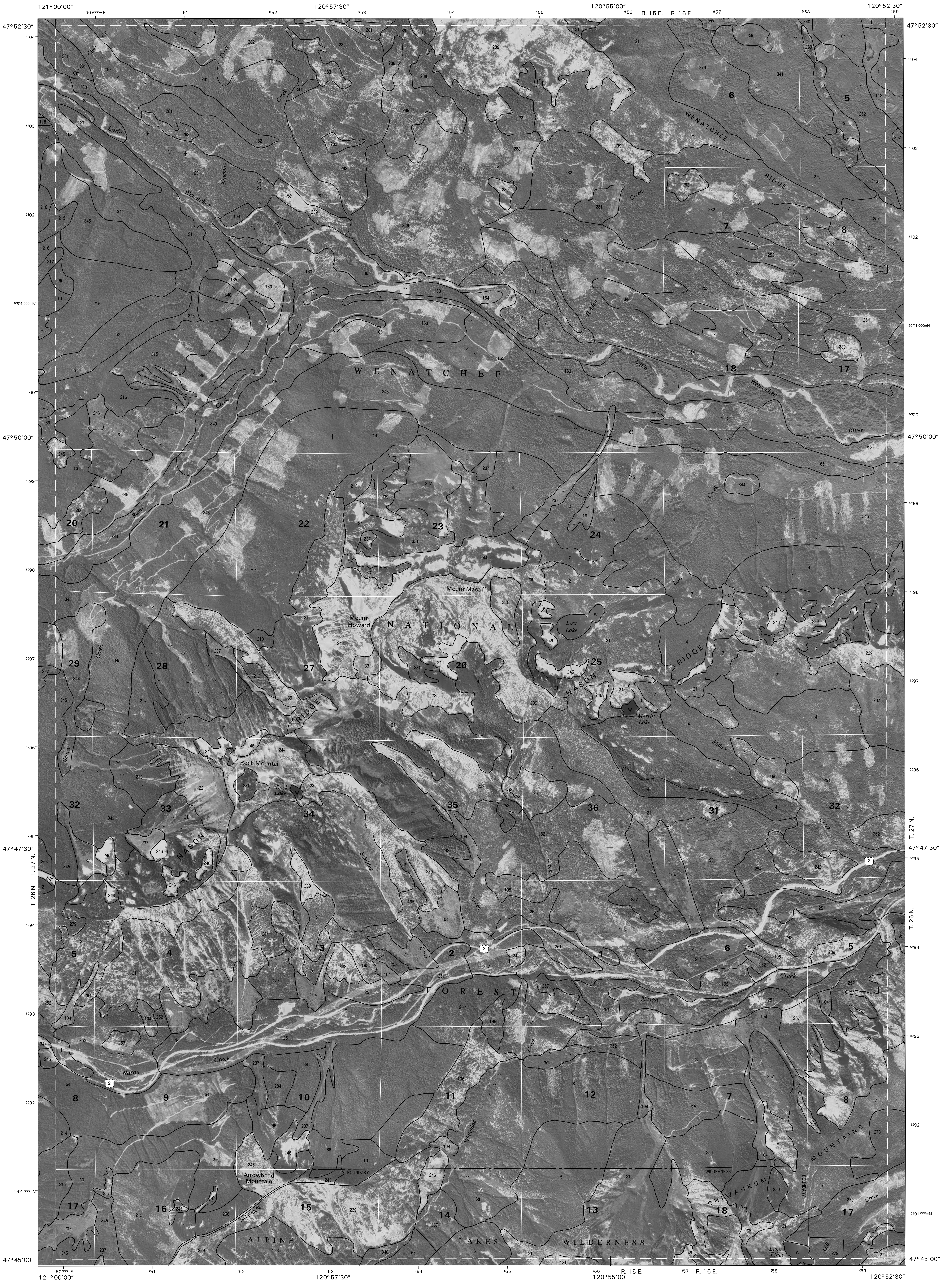
CASHMERE MOUNTAIN AREA, WASHINGTON
MOUNT HOWARD QUADRANGLE
SHEET NUMBER 40 OF 70



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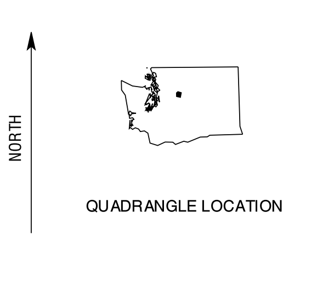

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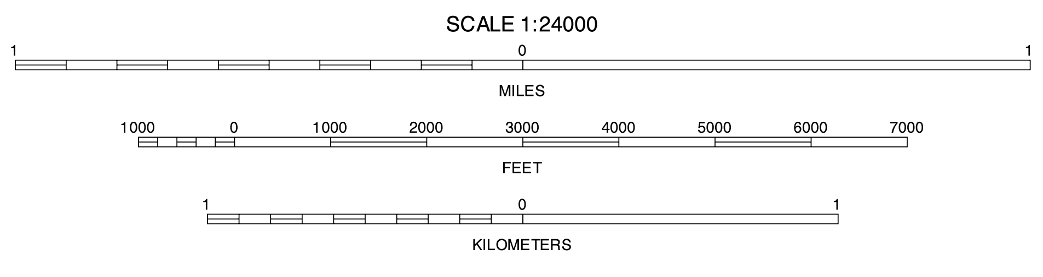

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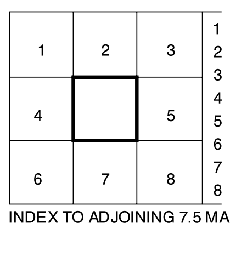

1 POE MOUNTAIN (SHEET 28)
2 MOUNT DAVID (SHEET 29)
3 SCHAEFER LAKE (SHEET 30)
4 LABYRINTH MOUNTAIN (SHEET 39)
5 LAKE WENATCHEE (SHEET 41)
6 STEVENS PASS (SHEET 48)
7 CHIWAUKUM MOUNTAINS (SHEET 49)
8 BIG JIM MOUNTAIN (SHEET 50)

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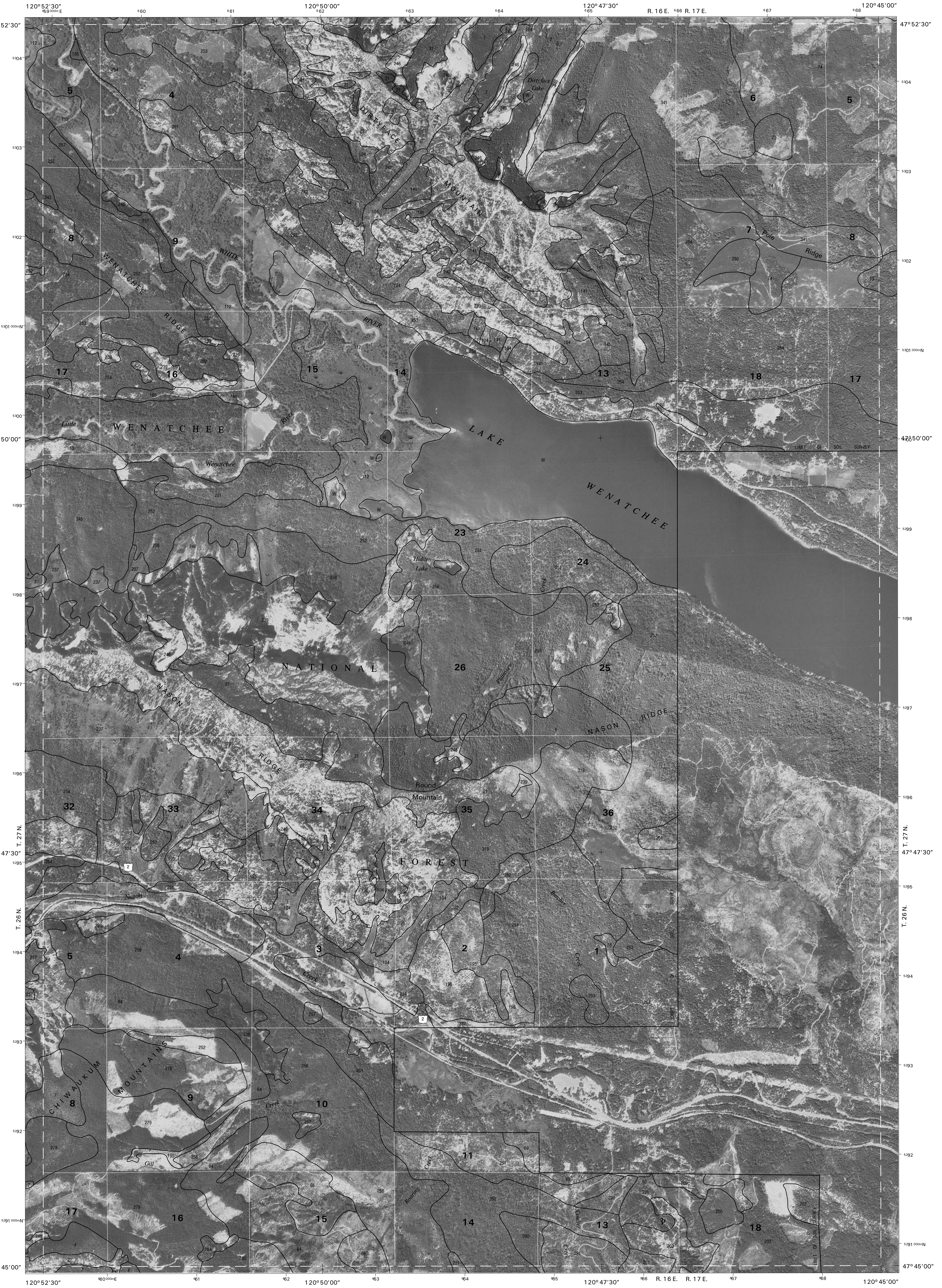
CASHMERE MOUNTAIN AREA, WASHINGTON
LAKE WENATCHEE QUADRANGLE
SHEET NUMBER 41 OF 70



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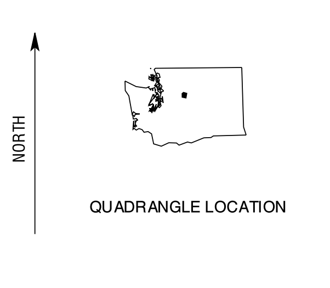
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

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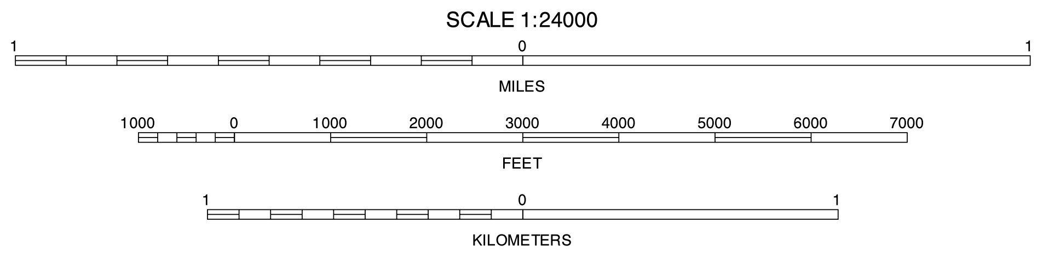

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4		5
6	7	8

1 MOUNT DAVID (SHEET 29)
2 SCHAEFER LAKE (SHEET 30)
3 CHIKAMIN CREEK (SHEET 31)
4 MOUNT HOWARD (SHEET 40)
5 PLAIN (SHEET 42)
6 CHIWAUKUM MOUNTAINS (SHEET 49)
7 BIG JIM MOUNTAIN (SHEET 50)
8 WINTON (SHEET 51)

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CASHMERE MOUNTAIN AREA, WASHINGTON
PLAIN QUADRANGLE
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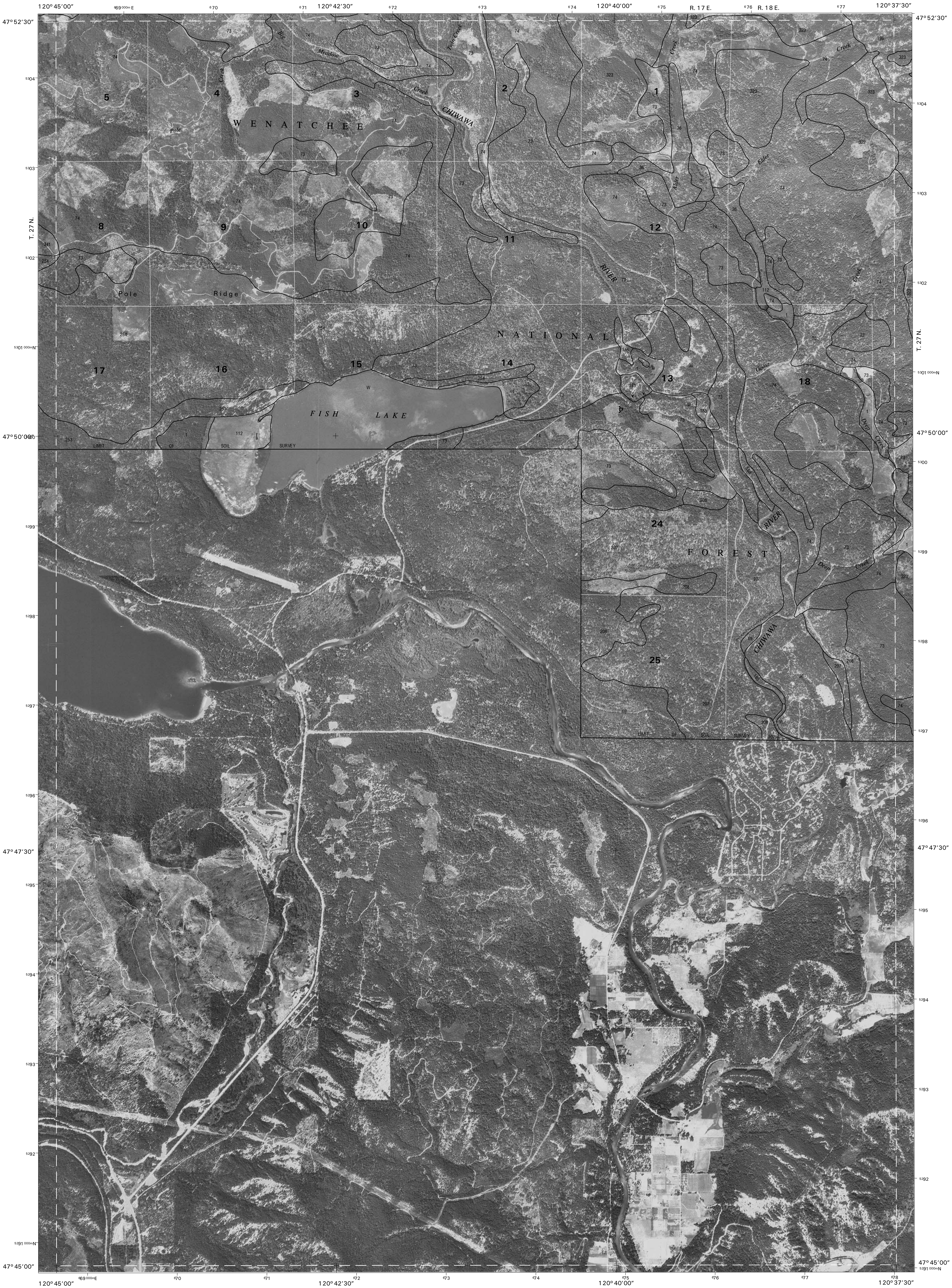

120° 45′00″

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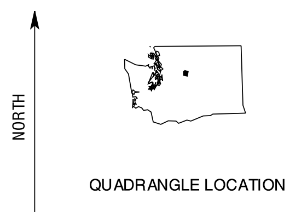

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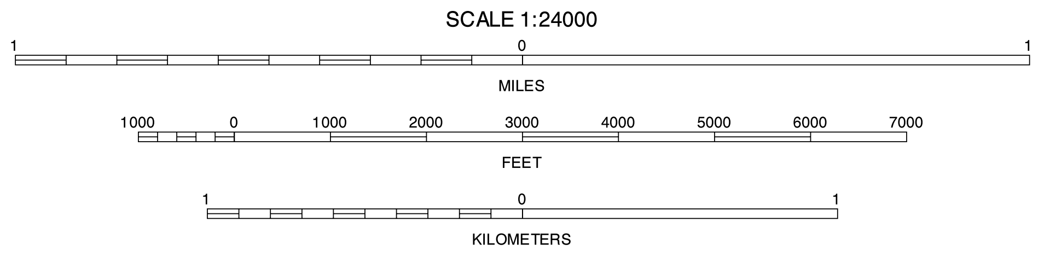

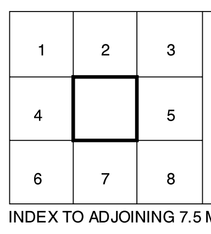

1 SCHAEFER LAKE (SHEET 30)
2 CHIKAMIN CREEK (SHEET 31)
3 SILVER FALLS (SHEET 32)
4 LAKE WENATCHEE (SHEET 41)
5 SUGARLOAF PEAK (SHEET 43)
6 BIG JIM MOUNTAIN (SHEET 50)
7 WINTON (SHEET 51)
8 VAN CREEK (SHEET 52)

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CASHMERE MOUNTAIN AREA, WASHINGTON
SUGARLOAF PEAK QUADRANGLE
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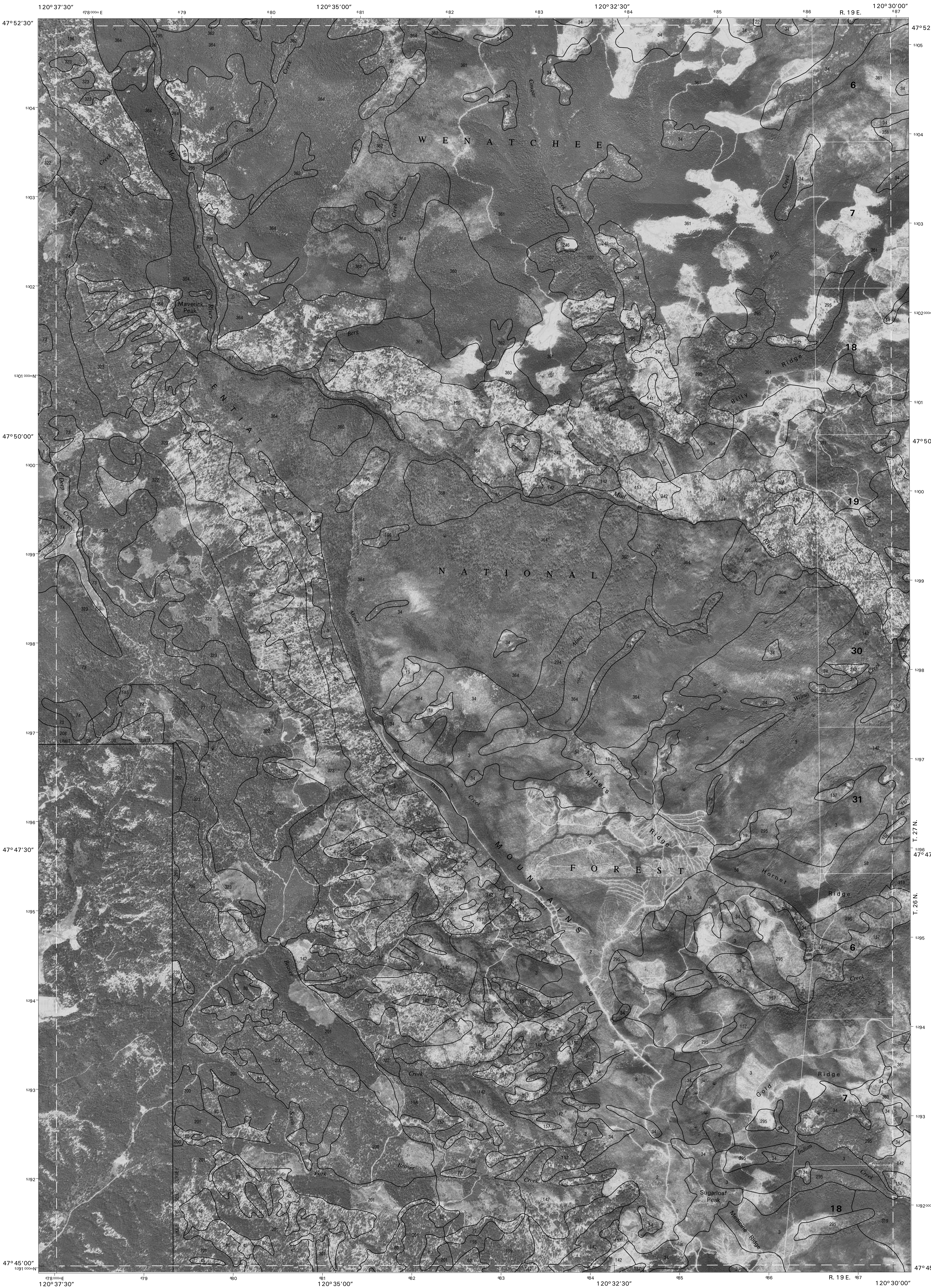

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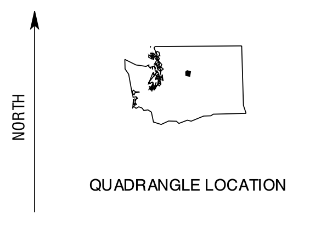
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



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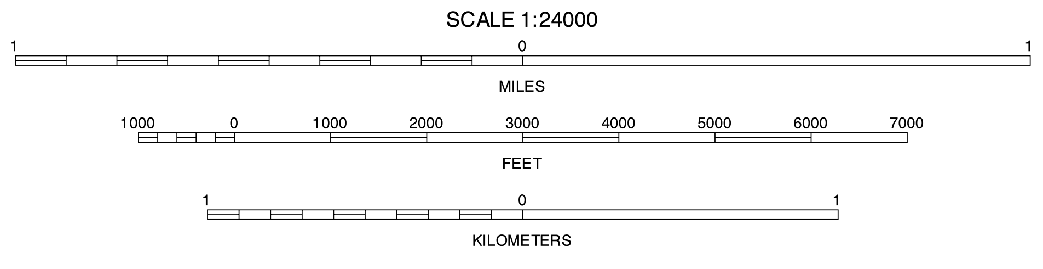

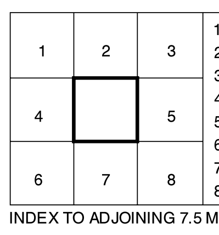

1 CHIKAMIN CREEK (SHEET 31)
2 SILVER FALLS (SHEET 32)
3 BRIEF (SHEET 33)
4 PLAIN (SHEET 42)
5 TYEE MOUNTAIN (SHEET 44)
6 WINTON (SHEET 51)
7 VAN CREEK (SHEET 52)
8 CHUMSTICK MOUNTAIN (SHEET 53)

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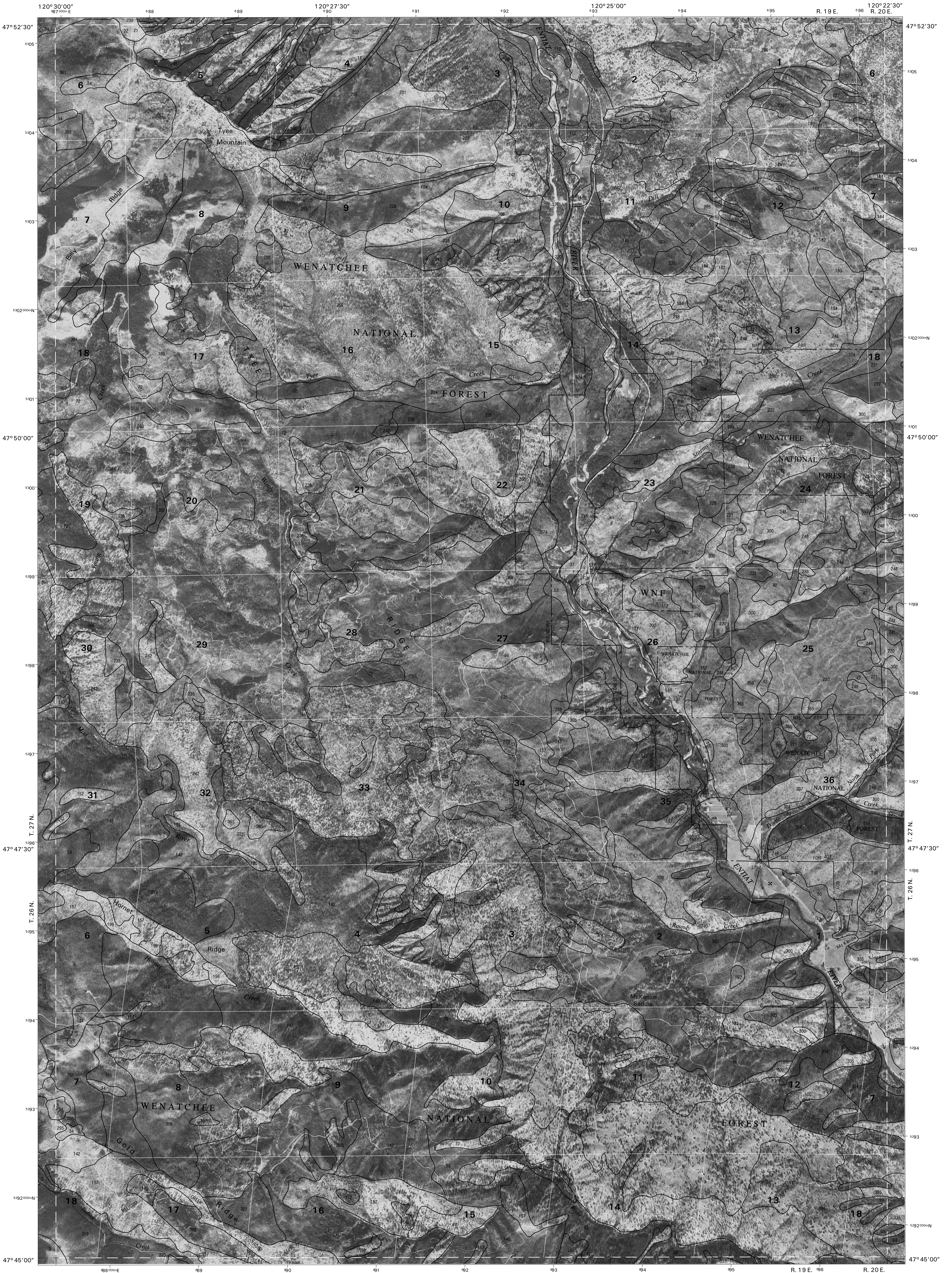
CASHMERE MOUNTAIN AREA, WASHINGTON
TYEE MOUNTAIN QUADRANGLE
SHEET NUMBER 44 OF 70



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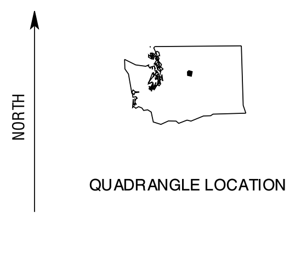

QUADRANGLE LOCATION

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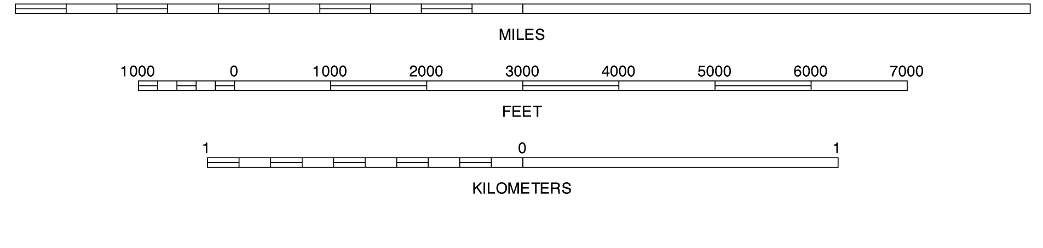

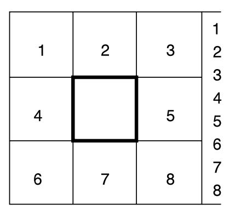

1 SILVER FALLS (SHEET 32)
2 BRIEF (SHEET 33)
3 STORMY MOUNTAIN (SHEET 34)
4 SUGARLOAF PEAK (SHEET 43)
5 BALDY MOUNTAIN (SHEET 45)
6 VAN CREEK (SHEET 52)
7 CHUMSTICK MOUNTAIN (SHEET 53)
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CASHMERE MOUNTAIN AREA, WASHINGTON
BALDY MOUNTAIN QUADRANGLE
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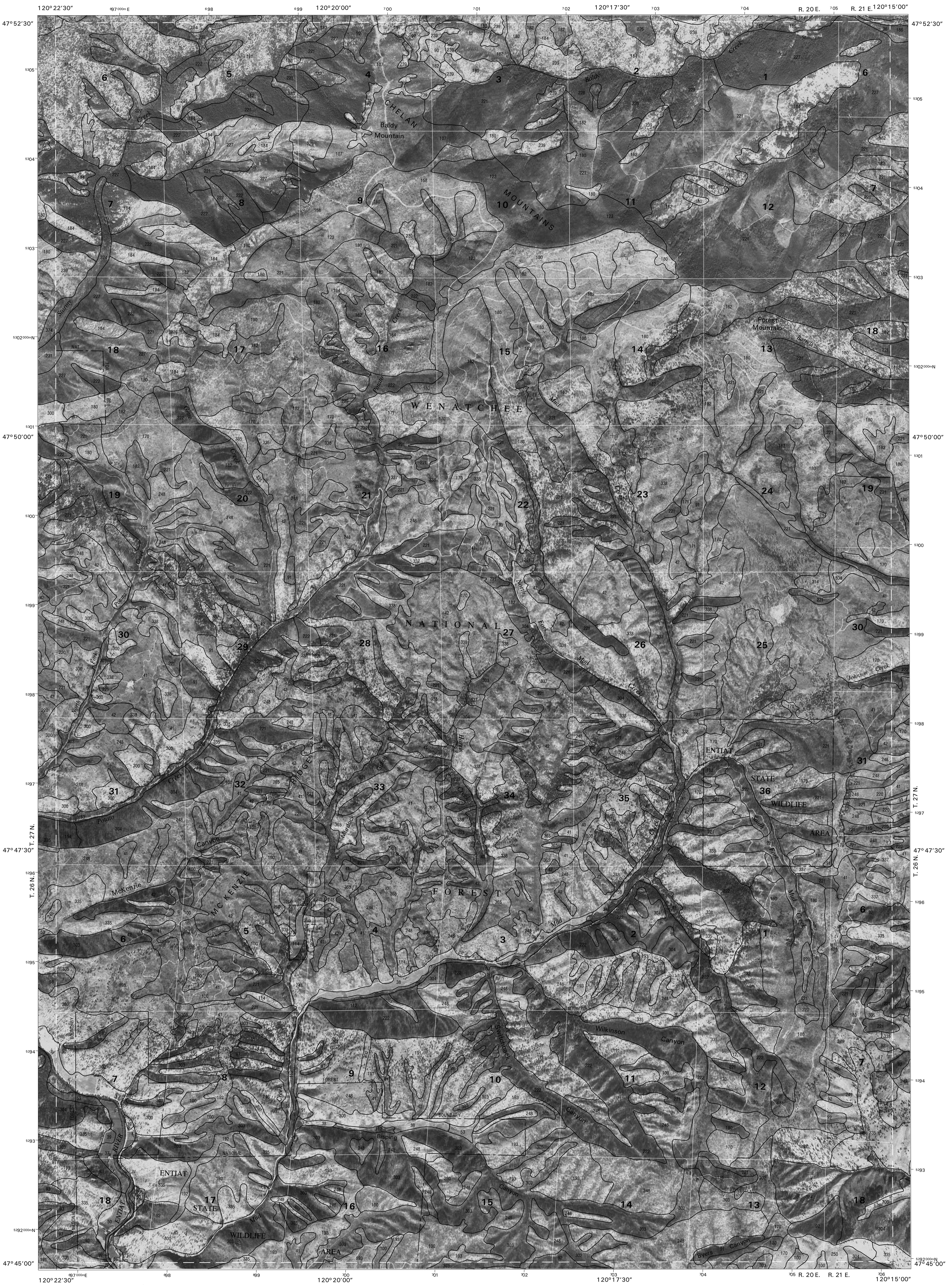

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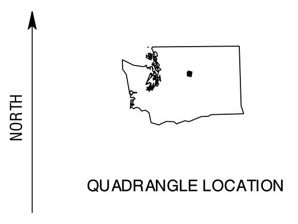
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

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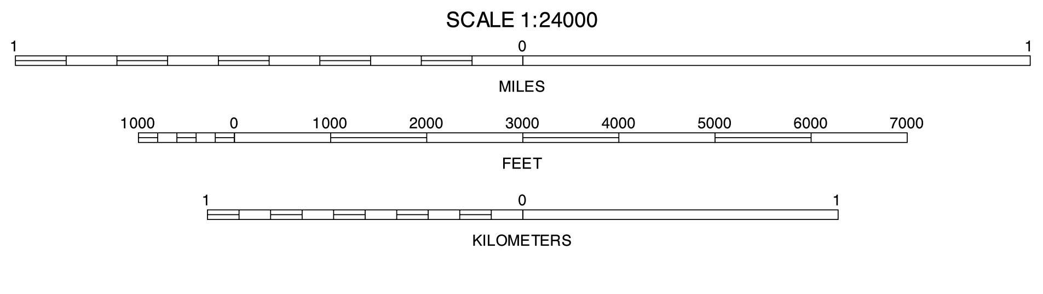

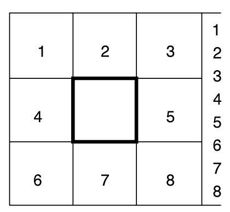

1 BRIEF (SHEET 33)
2 STORMY MOUNTAIN (SHEET 34)
3 MANSON (SHEET 35)
4 TYEE MOUNTAIN (SHEET 44)
5 WINESAP (SHEET 46)
6 CHUMSTICK MOUNTAIN (SHEET 53)
7 ARDENVOIR (SHEET 54)
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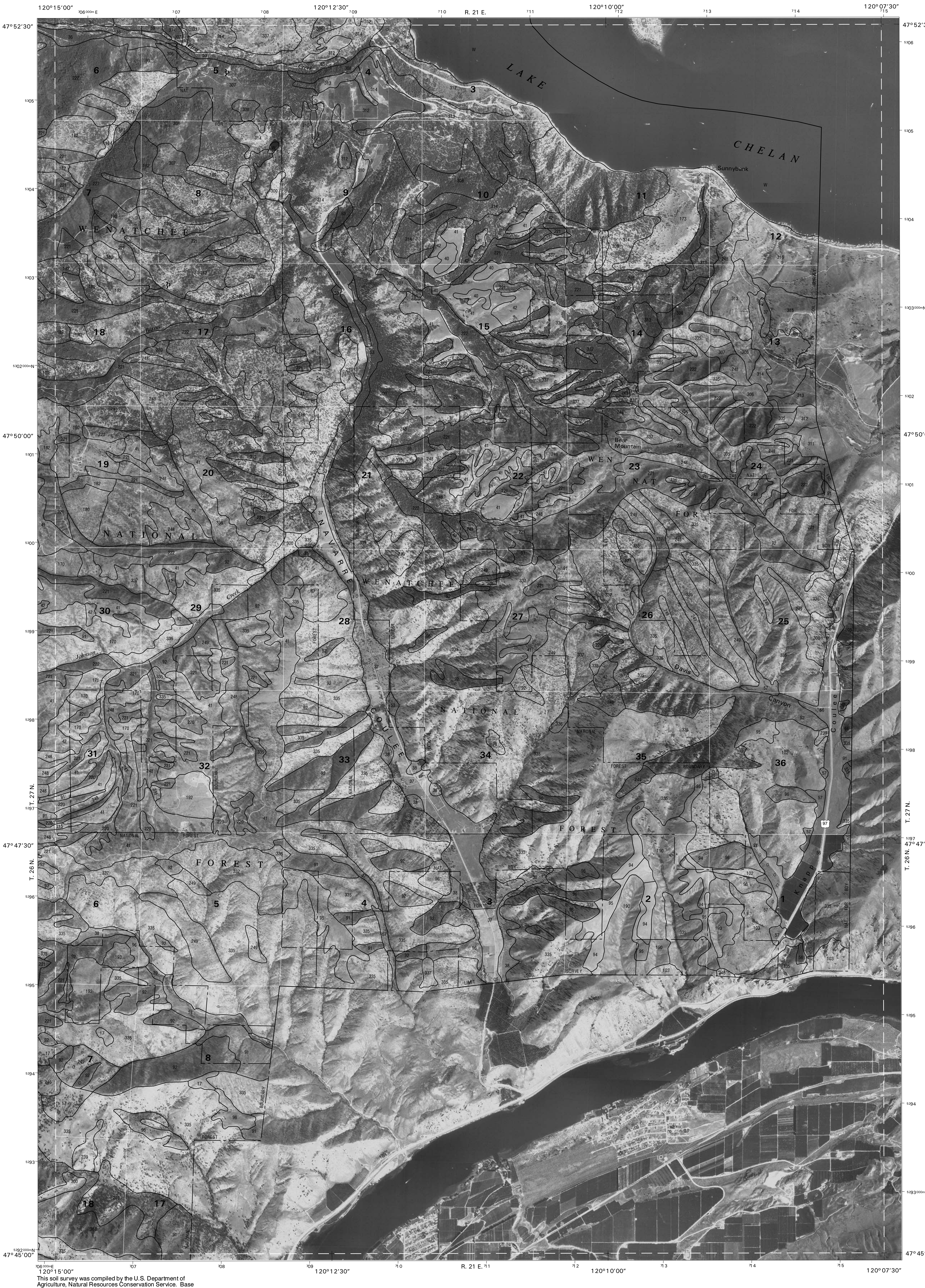
CASHMERE MOUNTAIN AREA, WASHINGTON
WINESAP QUADRANGLE
SHEET NUMBER 46 OF 70



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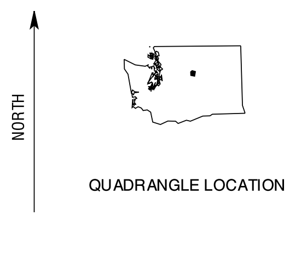
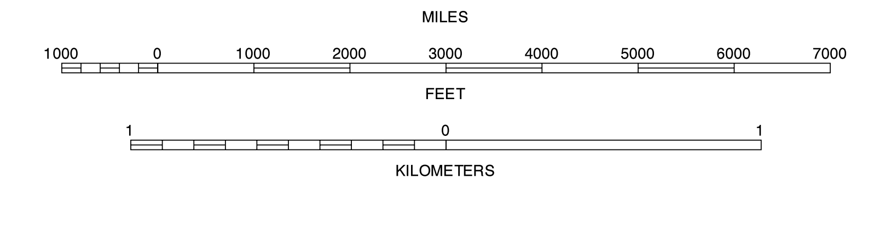
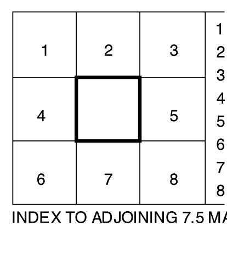


QUADRANGLE LOCATION

SCALE 1:24000





1 STORMY MOUNTAIN (SHEET 34)
2 MANSON (SHEET 35)
3 COOPER RIDGE (SHEET 36)
4 BALDY MOUNTAIN (SHEET 45)
5 CHELAN
6 ARDENVOIR (SHEET 54)
7 ENTIAT (SHEET 55)
8 WATERVILLE

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UNITED STATES
DEPARTMENT OF AGRICULTURE
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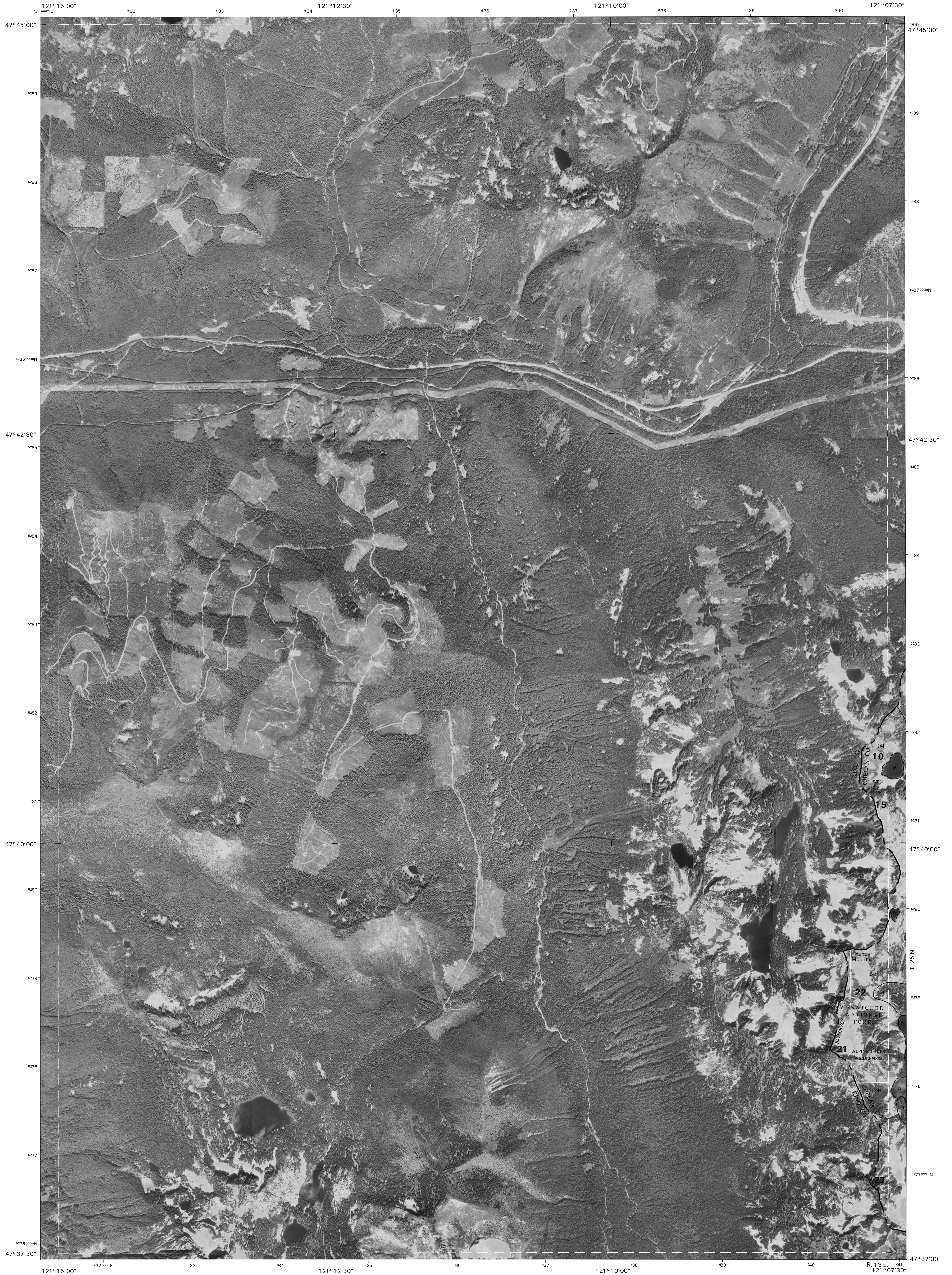
CASHMERE MOUNTAIN AREA, WASHINGTON
SCENIC QUADRANGLE
SHEET NUMBER 47 OF 70



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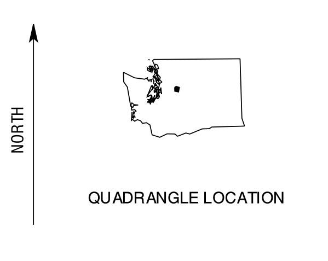

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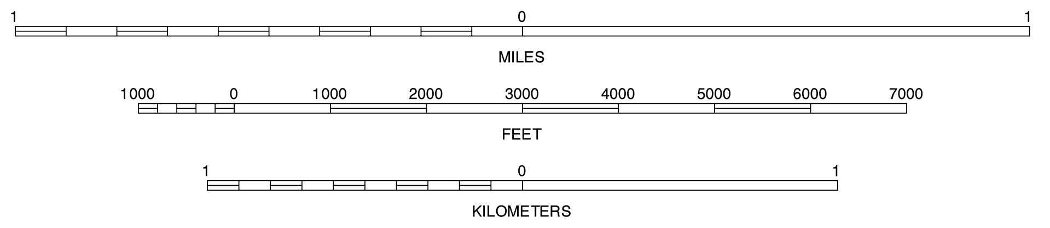

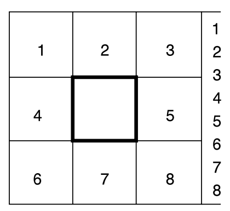

1 EVERGREEN MOUNTAIN
2 CAPTAIN POINT (SHEET 38)
3 LABYRINTH MOUNTAIN (SHEET 39)
4 SKYKOMISH
5 STEVENS PASS (SHEET 48)
6 BIG SNOW MOUNTAIN
7 MOUNT DANIEL
8 THE CRADLE (SHEET 56)

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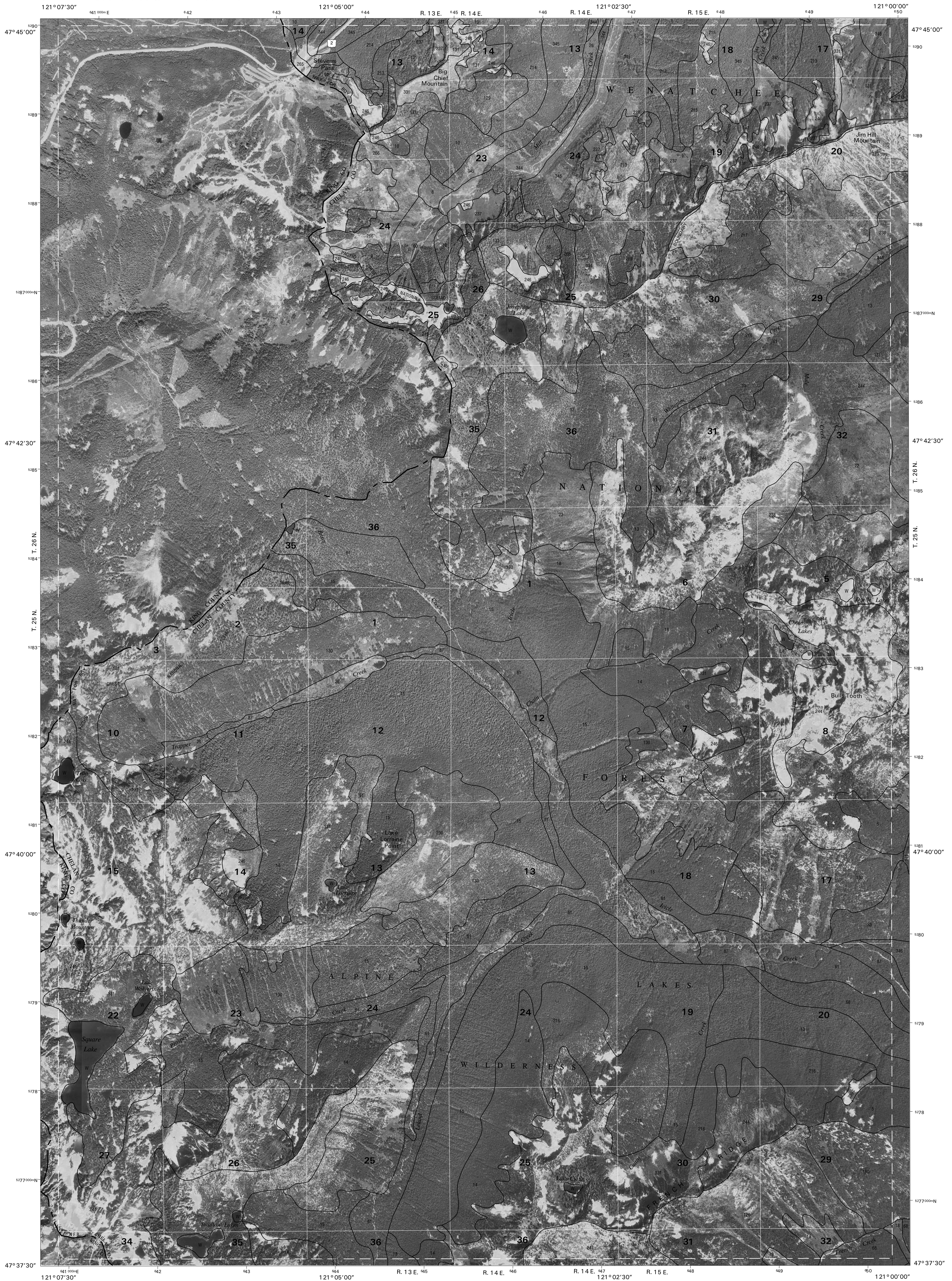
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
STEVENS PASS QUADRANGLE
SHEET NUMBER 48 OF 70



121° 07′30″

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QUADRANGLE LOCATION

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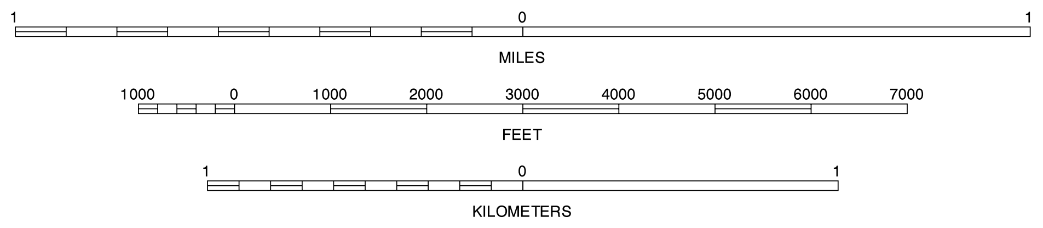

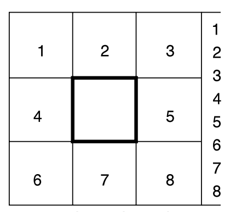

1 CAPTAIN POINT (SHEET 38)
2 LABYRINTH MOUNTAIN (SHEET 39)
3 MOUNT HOWARD (SHEET 40)
4 SCENIC (SHEET 47)
5 CHIWAUKUM MOUNTAINS (SHEET 49)
6 MOUNT DANIEL
7 THE CRADLE (SHEET 56)
8 JACK RIDGE (SHEET 57)

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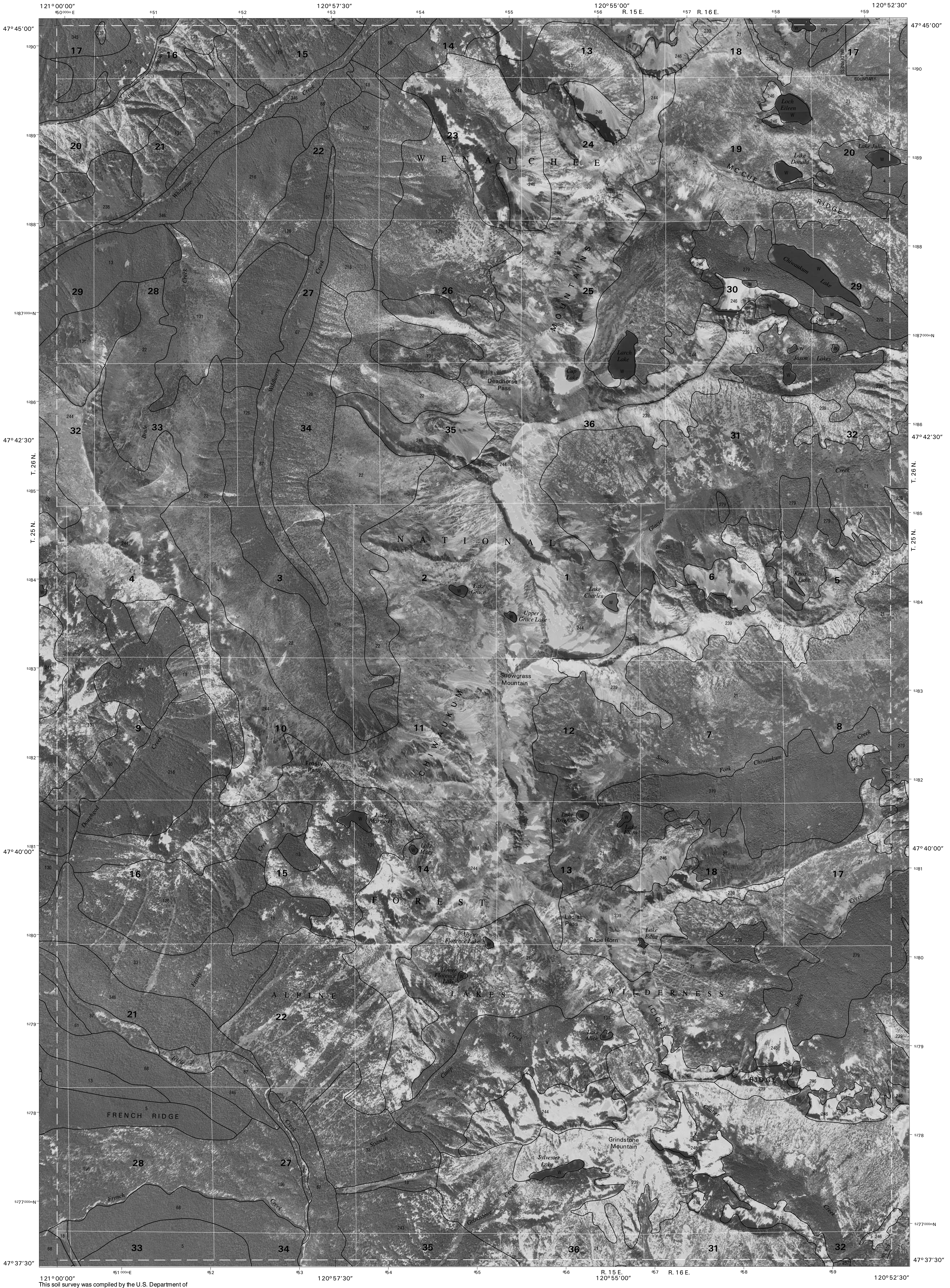
CASHMERE MOUNTAIN AREA, WASHINGTON
CHIWAUKUM MOUNTAINS QUADRANGLE
SHEET NUMBER 49 OF 70



121° 00′00″

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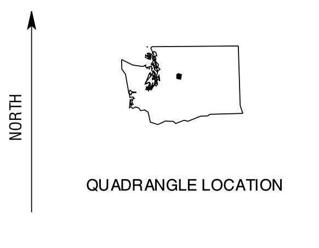
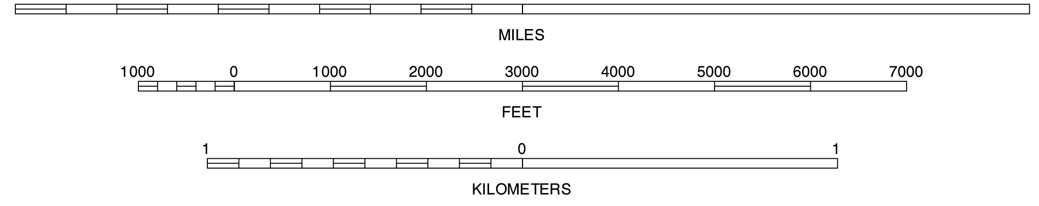
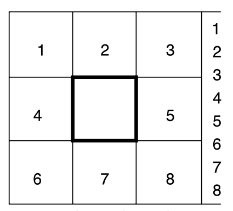


QUADRANGLE LOCATION

SCALE 1:24000





1 LABYRINTH MOUNTAIN (SHEET 39)
2 MOUNT HOWARD (SHEET 40)
3 LAKE WENATCHEE (SHEET 41)
4 STEVENS PASS (SHEET 48)
5 BIG JIM MOUNTAIN (SHEET 50)
6 THE CRADLE (SHEET 56)
7 JACK RIDGE (SHEET 57)
8 CASHMERE MOUNTAIN (SHEET 58)

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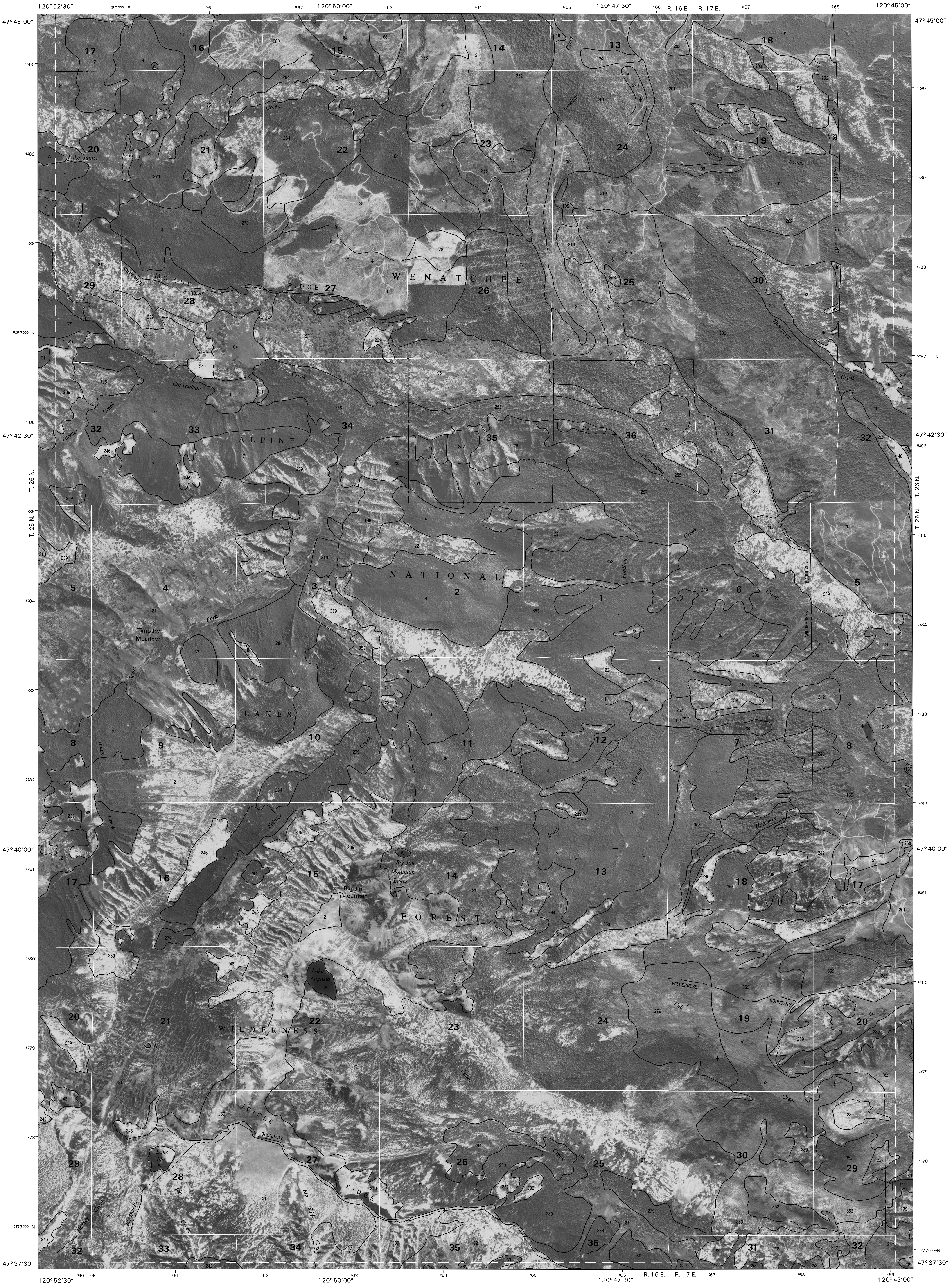
CASHMERE MOUNTAIN AREA, WASHINGTON
BIG JIM MOUNTAIN QUADRANGLE
SHEET NUMBER 50 OF 70



120°52′30″

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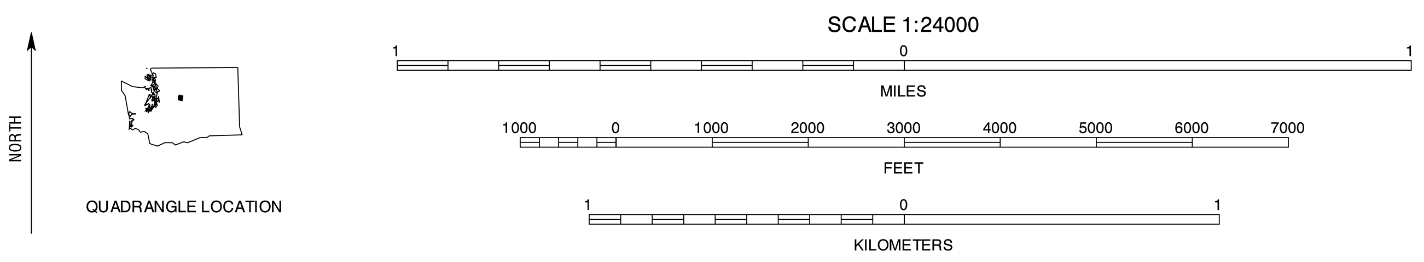

1	2	3
4		5
6	7	8

1 MOUNT HOWARD (SHEET 40)
2 LAKE WENATCHEE (SHEET 41)
3 PLAIN (SHEET 42)
4 CHIWAUKUM MOUNTAINS (SHEET 49)
5 WINTON (SHEET 51)
6 JACK RIDGE (SHEET 57)
7 CASHMERE MOUNTAIN (SHEET 58)
8 LEAVENWORTH (SHEET 59)

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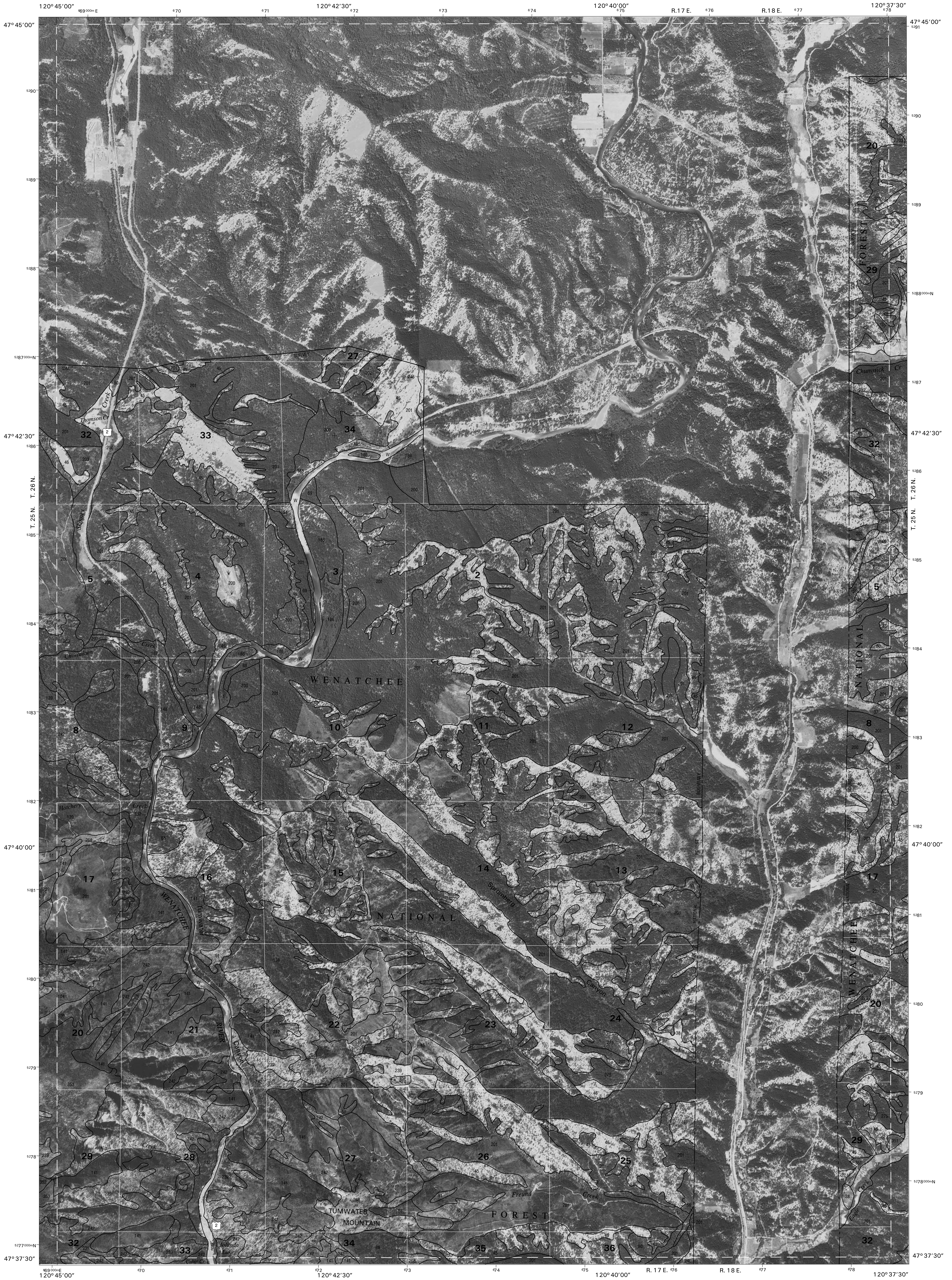
CASHMERE MOUNTAIN AREA, WASHINGTON
WINTON QUADRANGLE
SHEET NUMBER 51 OF 70



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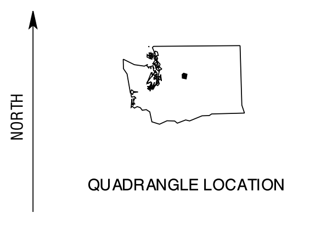

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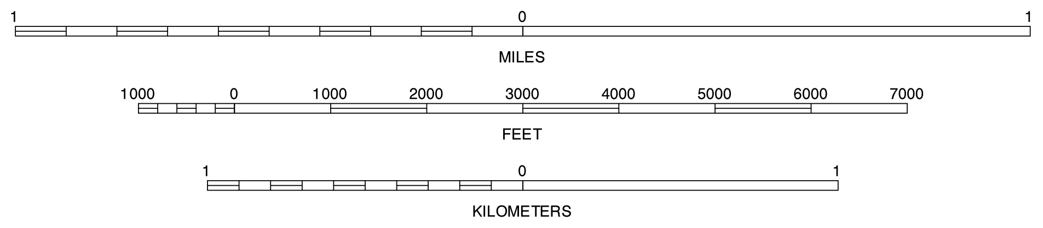

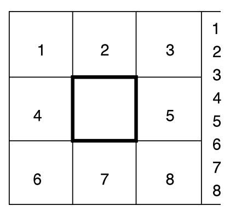

1 LAKE WENATCHEE (SHEET 41)
2 PLAIN (SHEET 42)
3 SUGARLOAF PEAK (SHEET 43)
4 BIG JIM MOUNTAIN (SHEET 50)
5 VAN CREEK (SHEET 52)
6 CASHMERE MOUNTAIN (SHEET 58)
7 LEAVENWORTH (SHEET 59)
8 PESHASTIN (SHEET 60)

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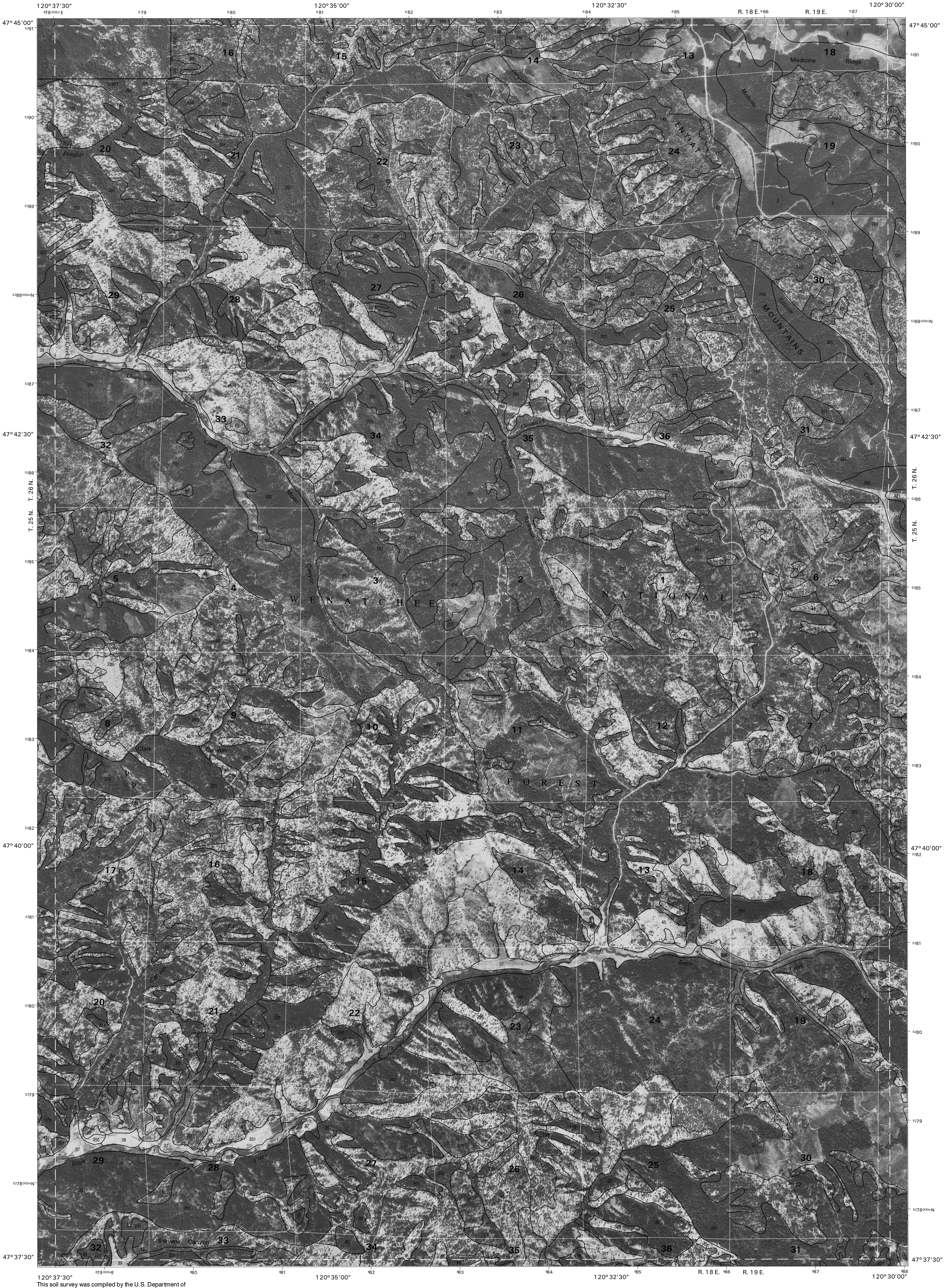
CASHMERE MOUNTAIN AREA, WASHINGTON
VAN CREEK QUADRANGLE
SHEET NUMBER 52 OF 70



120° 37′30″ 120° 35′00″ 120° 32′30″ 120° 30′00″

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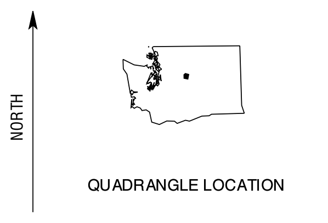
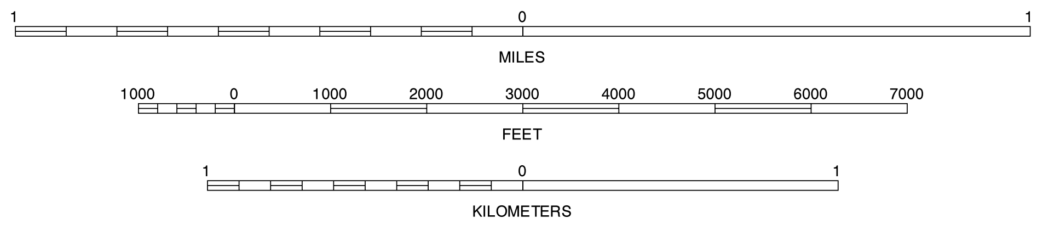
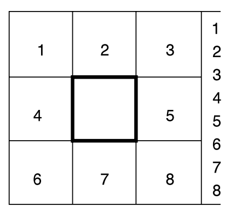


QUADRANGLE LOCATION

SCALE 1:24000





1 PLAIN (SHEET 42)
2 SUGARLOAF PEAK (SHEET 43)
3 TYEE MOUNTAIN (SHEET 44)
4 WINTON (SHEET 51)
5 CHUMSTICK MOUNTAIN (SHEET 53)
6 LEAVENWORTH (SHEET 59)
7 PESHASTIN (SHEET 60)
8 CASHMERE (SHEET 61)

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CASHMERE MOUNTAIN AREA, WASHINGTON
CHUMSTICK MOUNTAIN QUADRANGLE
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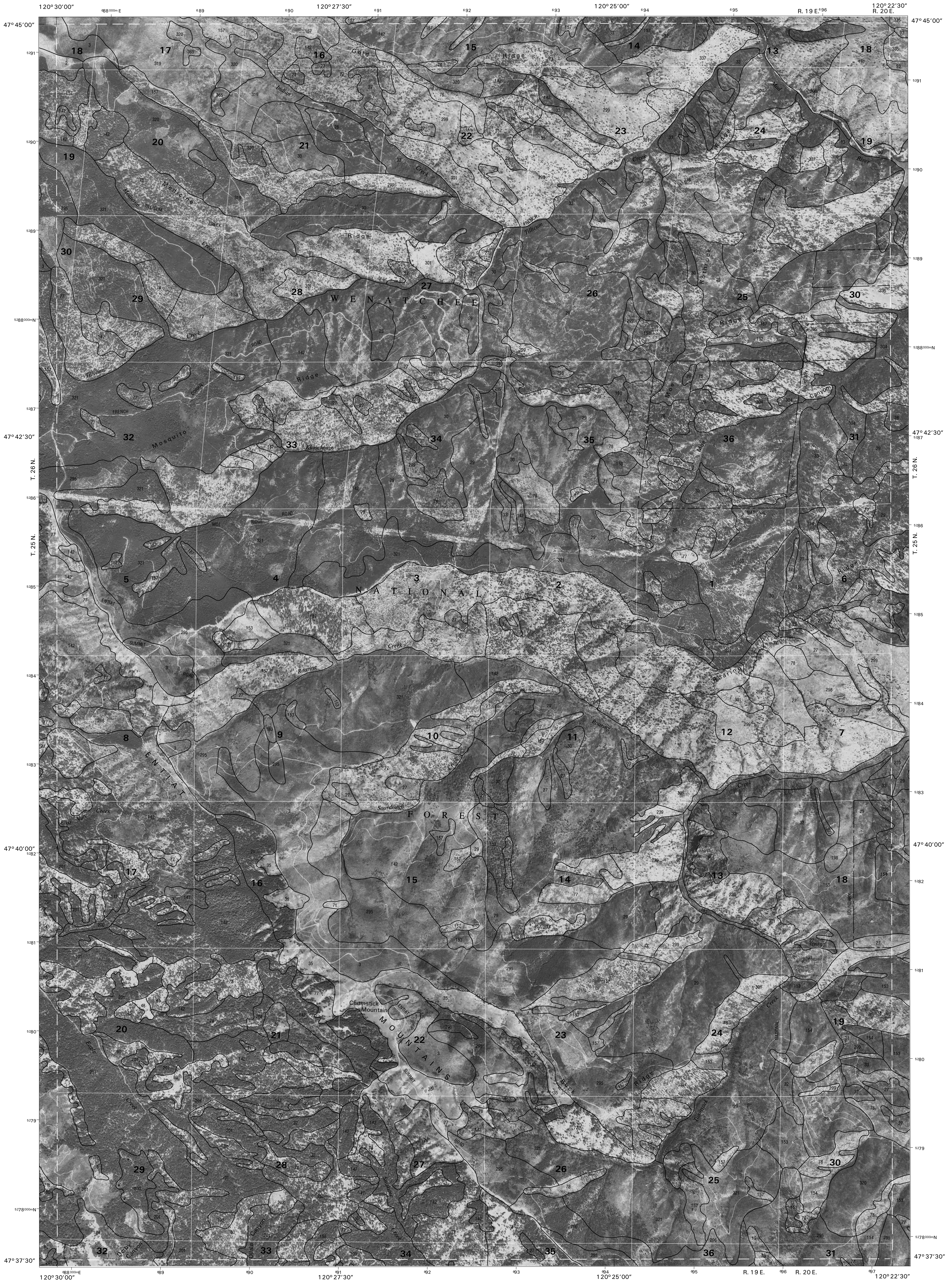

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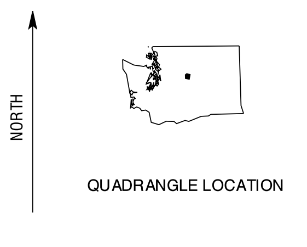
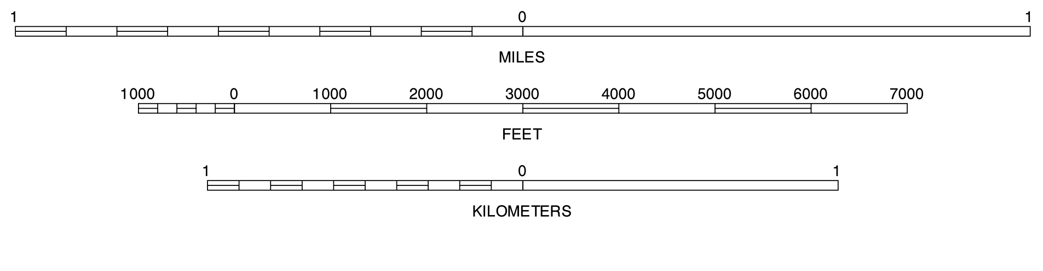
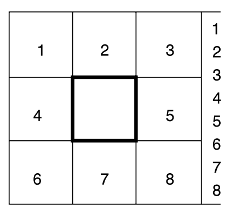
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000





1 SUGARLOAF PEAK (SHEET 43)
2 TYEE MOUNTAIN (SHEET 44)
3 BALDY MOUNTAIN (SHEET 45)
4 VAN CREEK (SHEET 52)
5 ARDENVOIR (SHEET 54)
6 PESHASTIN (SHEET 60)
7 CASHMERE (SHEET 61)
8 ROCKY REACH DAM (SHEET 62)

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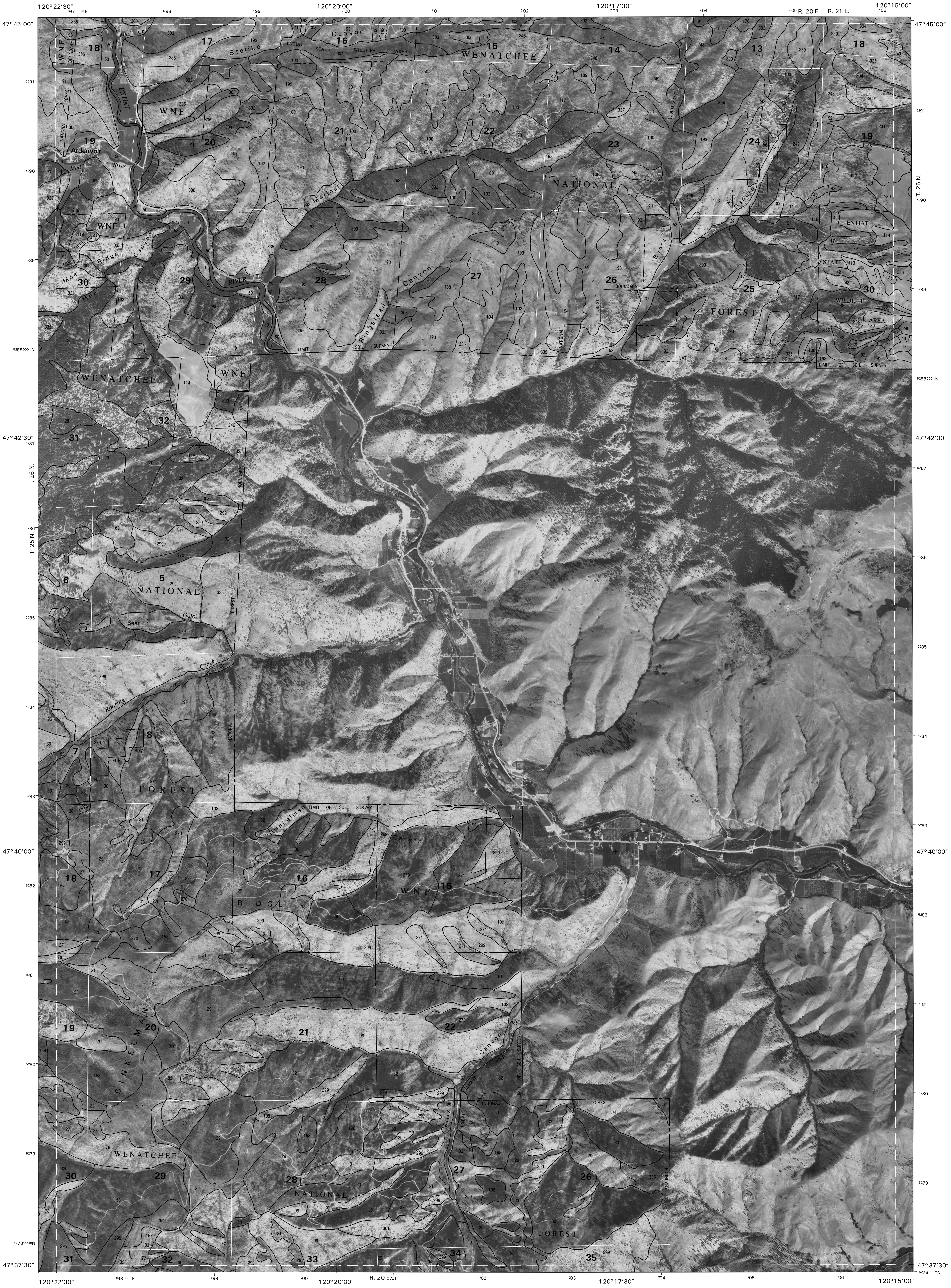
CASHMERE MOUNTAIN AREA, WASHINGTON
ARDENVOIR QUADRANGLE
SHEET NUMBER 54 OF 70



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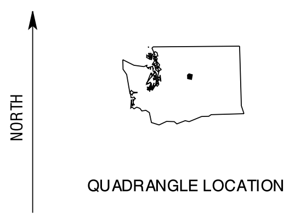
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

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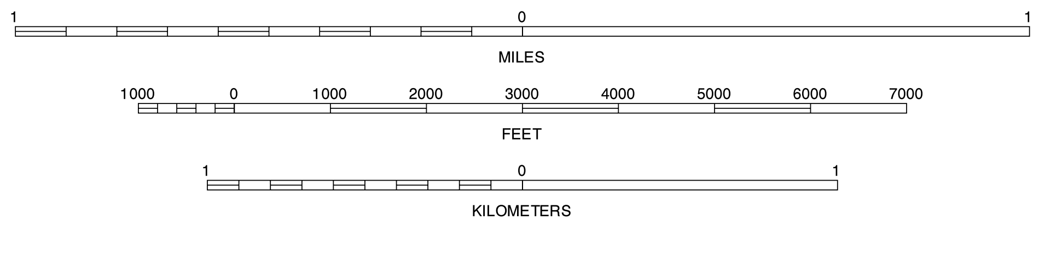

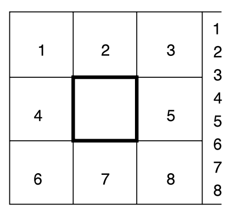

1 TYEE MOUNTAIN (SHEET 44)
2 BALDY MOUNTAIN (SHEET 45)
3 WINESAP (SHEET 46)
4 CHUMSTICK MOUNTAIN (SHEET 53)
5 ENTIAT (SHEET 55)
6 CASHMERE (SHEET 61)
7 ROCKY REACH DAM (SHEET 62)
8 ORONDO

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UNITED STATES
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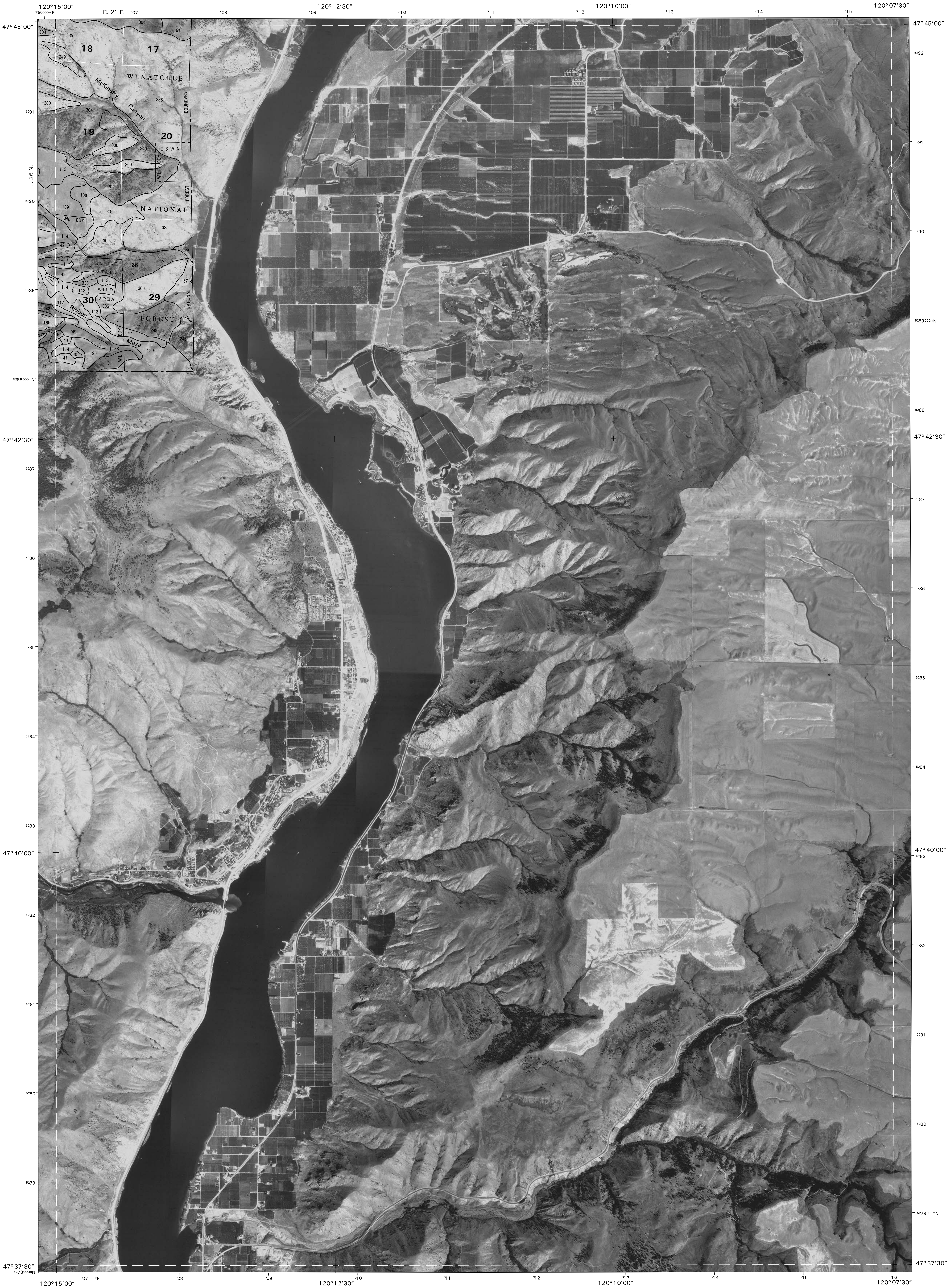
CASHMERE MOUNTAIN AREA, WASHINGTON
ENTIAT QUADRANGLE
SHEET NUMBER 55 OF 70



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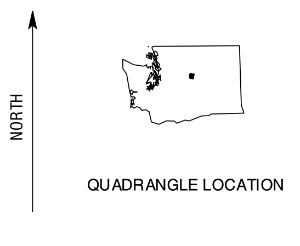
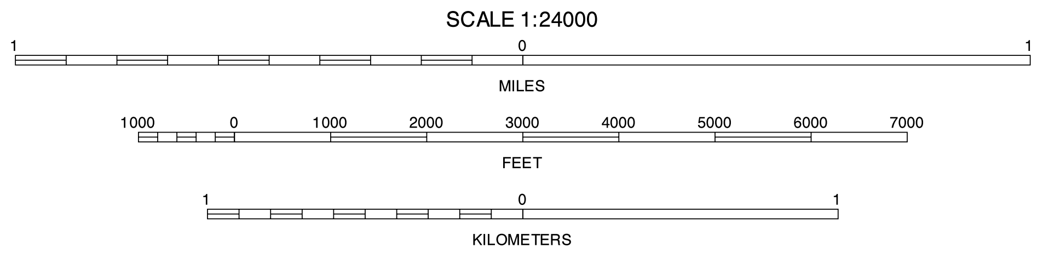
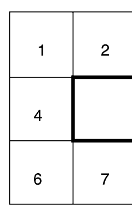
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000





1 BALDY MOUNTAIN (SHEET 45)
2 WINESAP (SHEET 46)
3 CHELAN
4 ARDENVOIR (SHEET 54)
5 WATERVILLE
6 ROCKY REACH DAM (SHEET 62)
7 ORONDO
8 DOUGLAS

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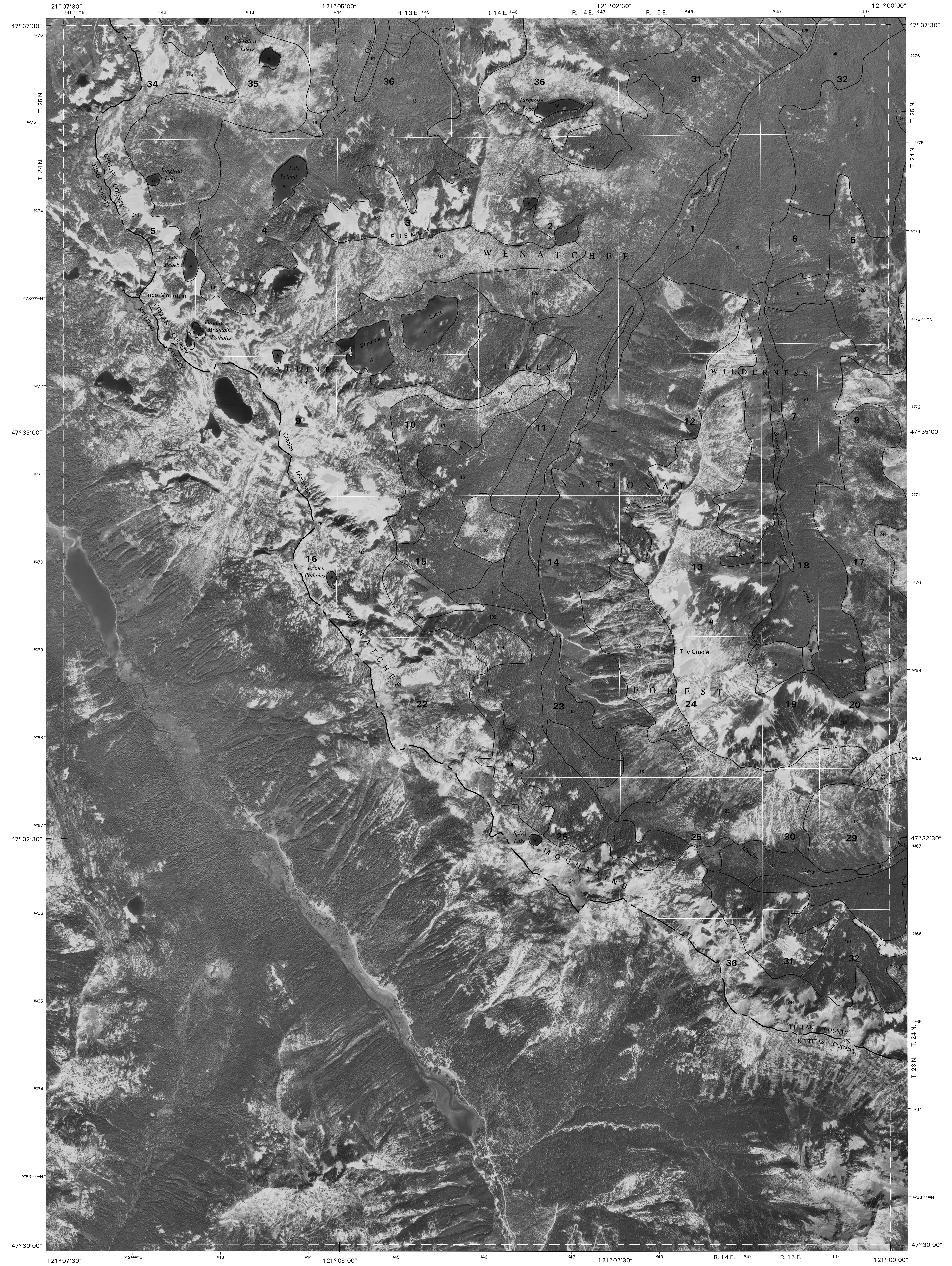
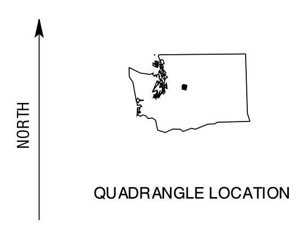
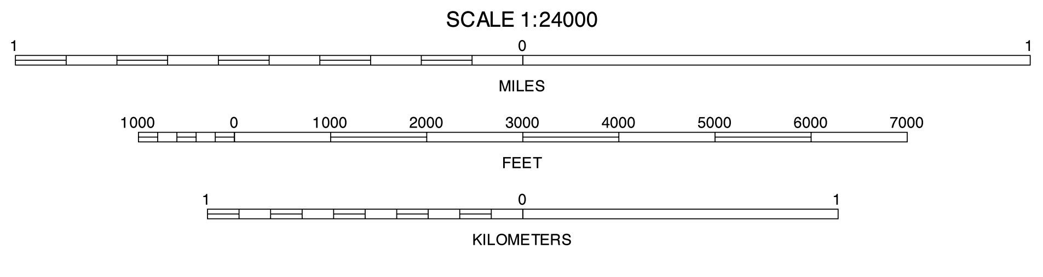
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
THE CRADLE QUADRANGLE
SHEET NUMBER 56 OF 70



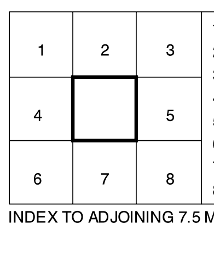


QUADRANGLE LOCATION



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1998 aerial photography. Culture was acquired from the USGS. Public land survey system (PLSS) was acquired from Washington Department of Natural Resources. National forest and wilderness boundaries were acquired from the U.S.Department of Agriculture, Forest Service. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



1 SCENIC (SHEET 47)
2 STEVENS PASS (SHEET 48)
3 CHIWAUKUM MOUNTAINS (SHEET 49)
4 MOUNT DANIEL
5 JACK RIDGE (SHEET 57)
6 POLALLIE RIDGE
7 DAVIS PEAK
8 MOUNT STUART (SHEET 63)

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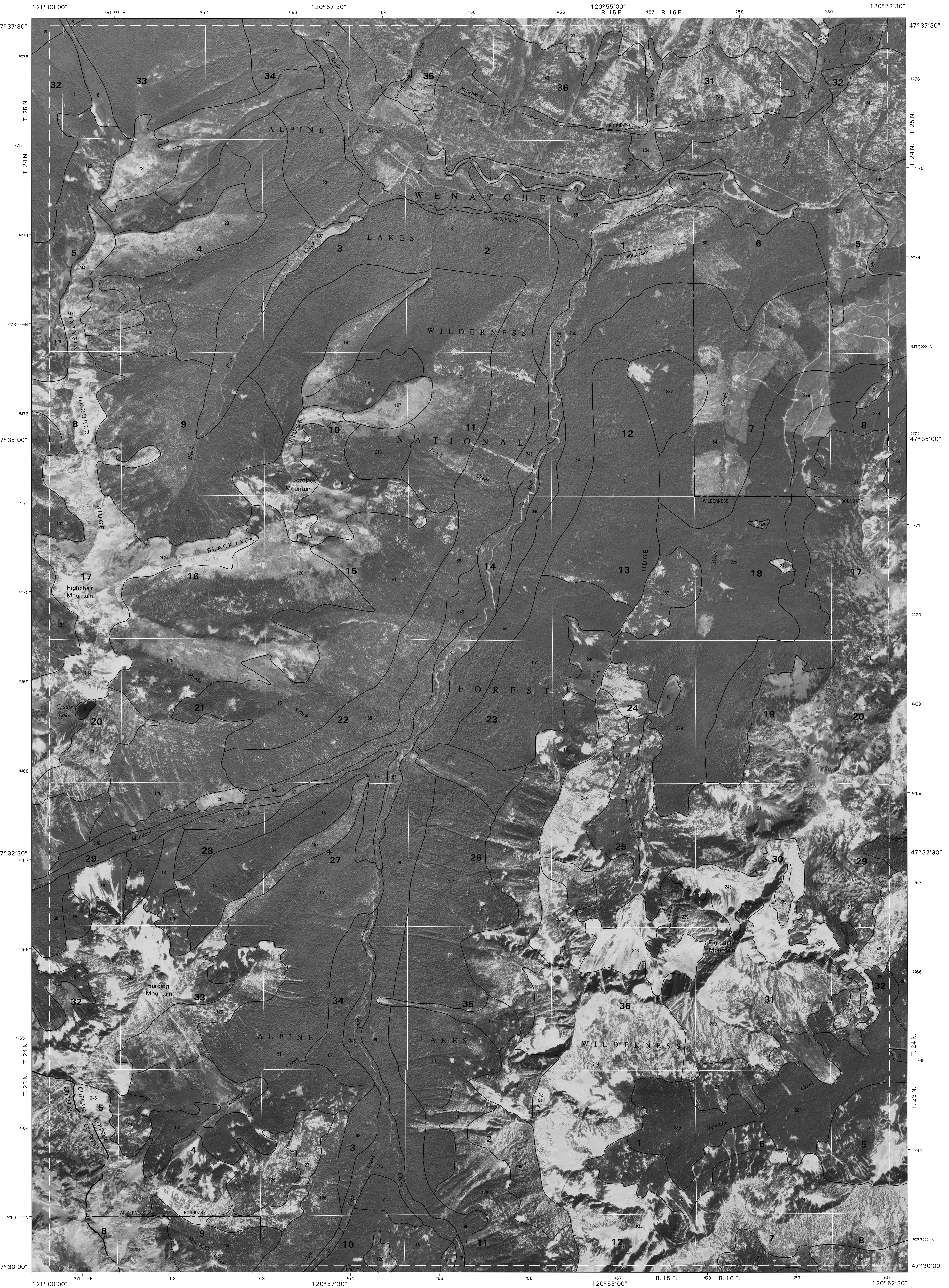
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
JACK RIDGE QUADRANGLE
SHEET NUMBER 57 OF 70



121°00'00"
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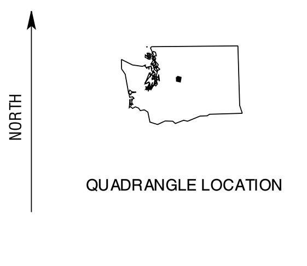

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

1	2	3
4		5
6	7	8

1 STEVENS PASS (SHEET 48)
2 CHIWAUKUM MOUNTAINS (SHEET 49)
3 BIG JIM MOUNTAIN (SHEET 50)
4 THE CRADLE (SHEET 56)
5 CASHMERE MOUNTAIN (SHEET 58)
6 DAVIS PEAK
7 MOUNT STUART (SHEET 63)
8 ENCHANTMENT LAKES (SHEET 64)

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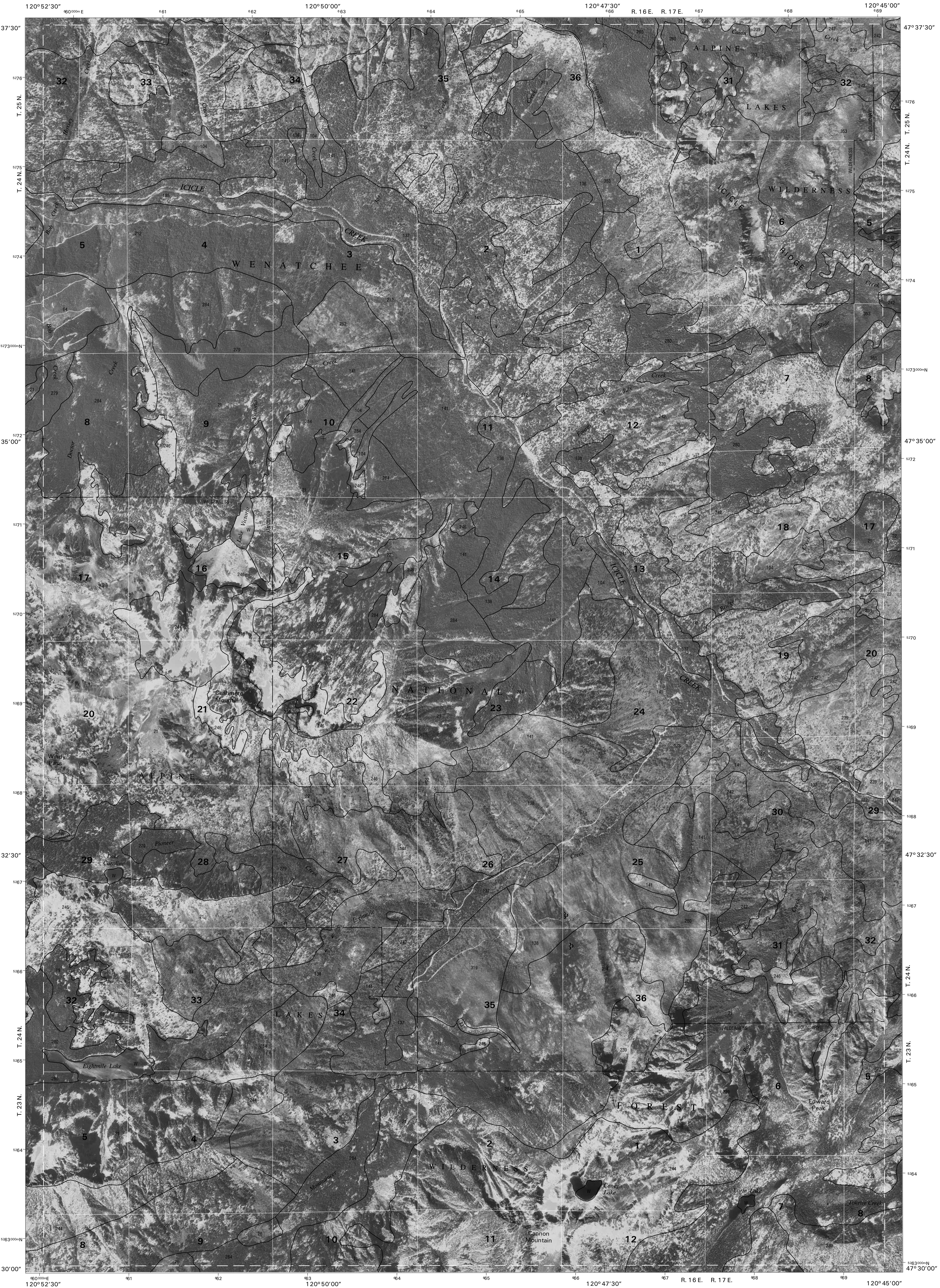
CASHMERE MOUNTAIN AREA, WASHINGTON
CASHMERE MOUNTAIN QUADRANGLE
SHEET NUMBER 58 OF 70



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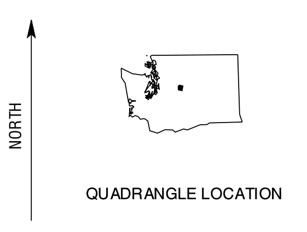

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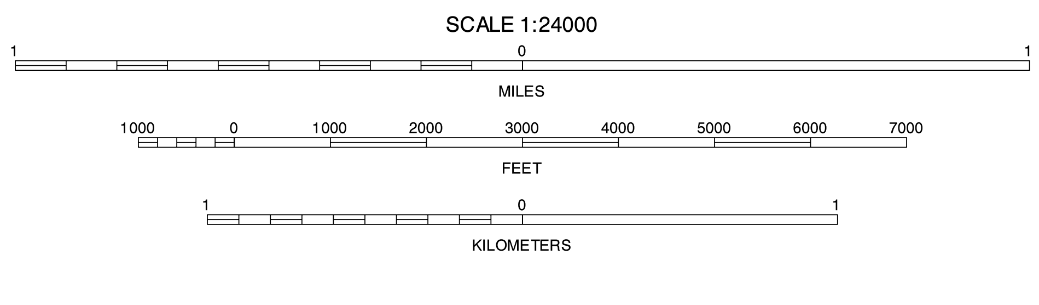

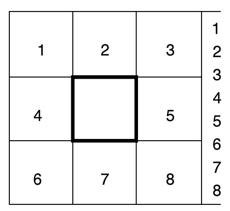

1 CHIWAUKUM MOUNTAINS (SHEET 49)
2 BIG JIM MOUNTAIN (SHEET 50)
3 WINTON (SHEET 51)
4 JACK RIDGE (SHEET 57)
5 LEAVENWORTH (SHEET 59)
6 MOUNT STUART (SHEET 63)
7 ENCHANTMENT LAKES (SHEET 64)
8 BLEWETT (SHEET 65)

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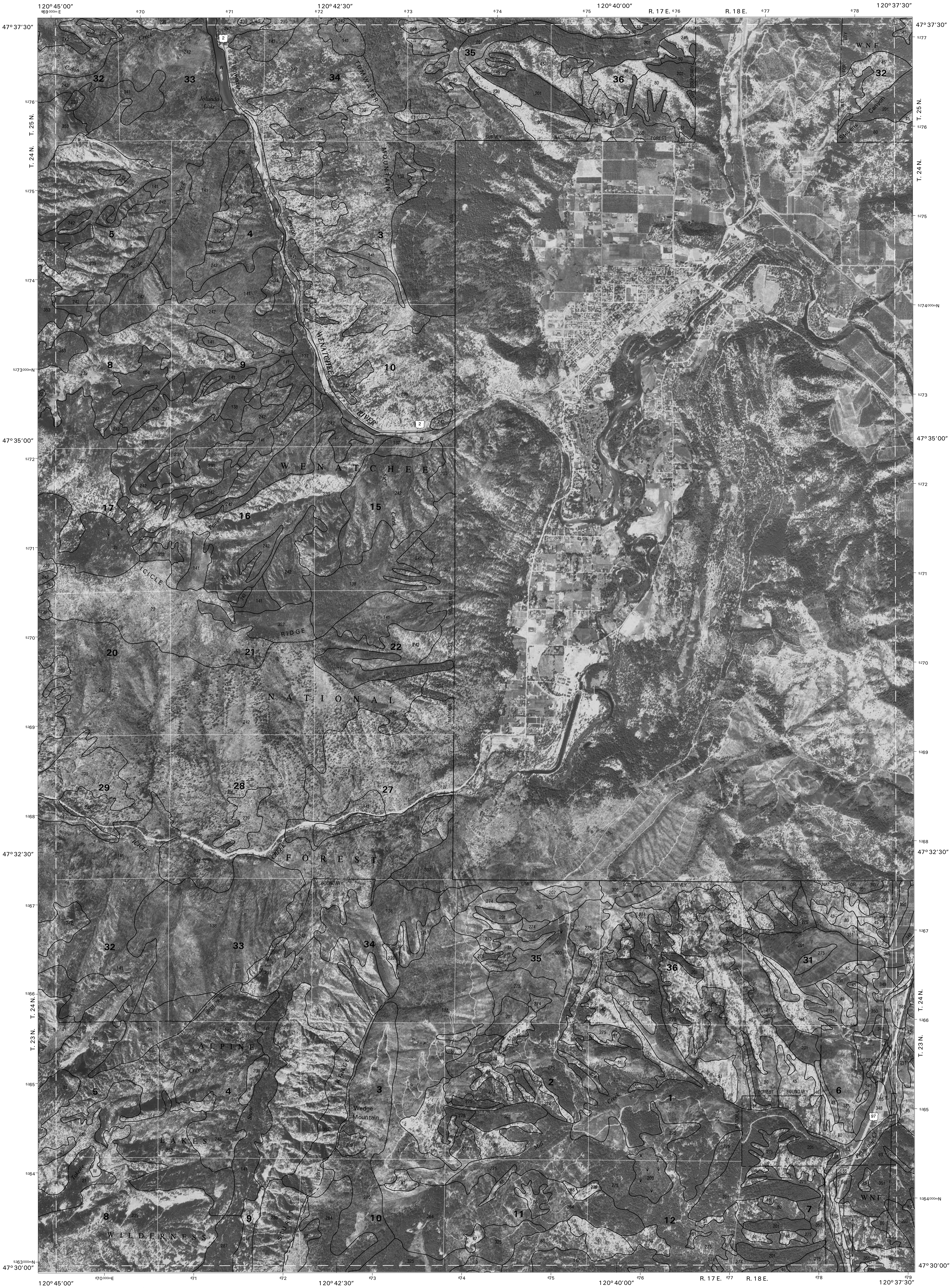
CASHMERE MOUNTAIN AREA, WASHINGTON
LEAVENWORTH QUADRANGLE
SHEET NUMBER 59 OF 70



120° 45′00″

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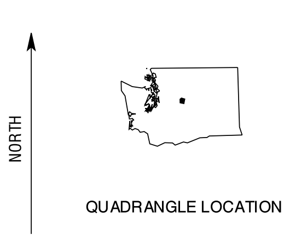

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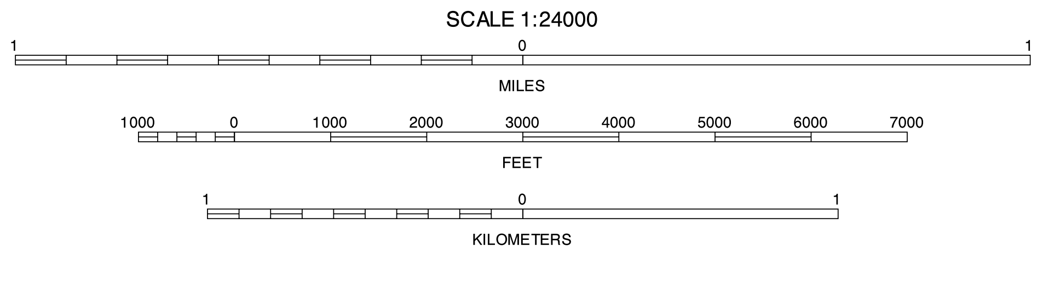
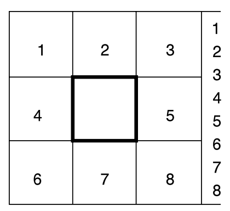
SCALE 1:24000





1 BIG JIM MOUNTAIN (SHEET 50)
2 WINTON (SHEET 51)
3 VAN CREEK (SHEET 52)
4 CASHMERE MOUNTAIN (SHEET 58)
5 PESHASTIN (SHEET 60)
6 ENCHANTMENT LAKES (SHEET 64)
7 BLEWETT (SHEET 65)
8 TIPTOP (SHEET 66)

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PESHASTIN QUADRANGLE
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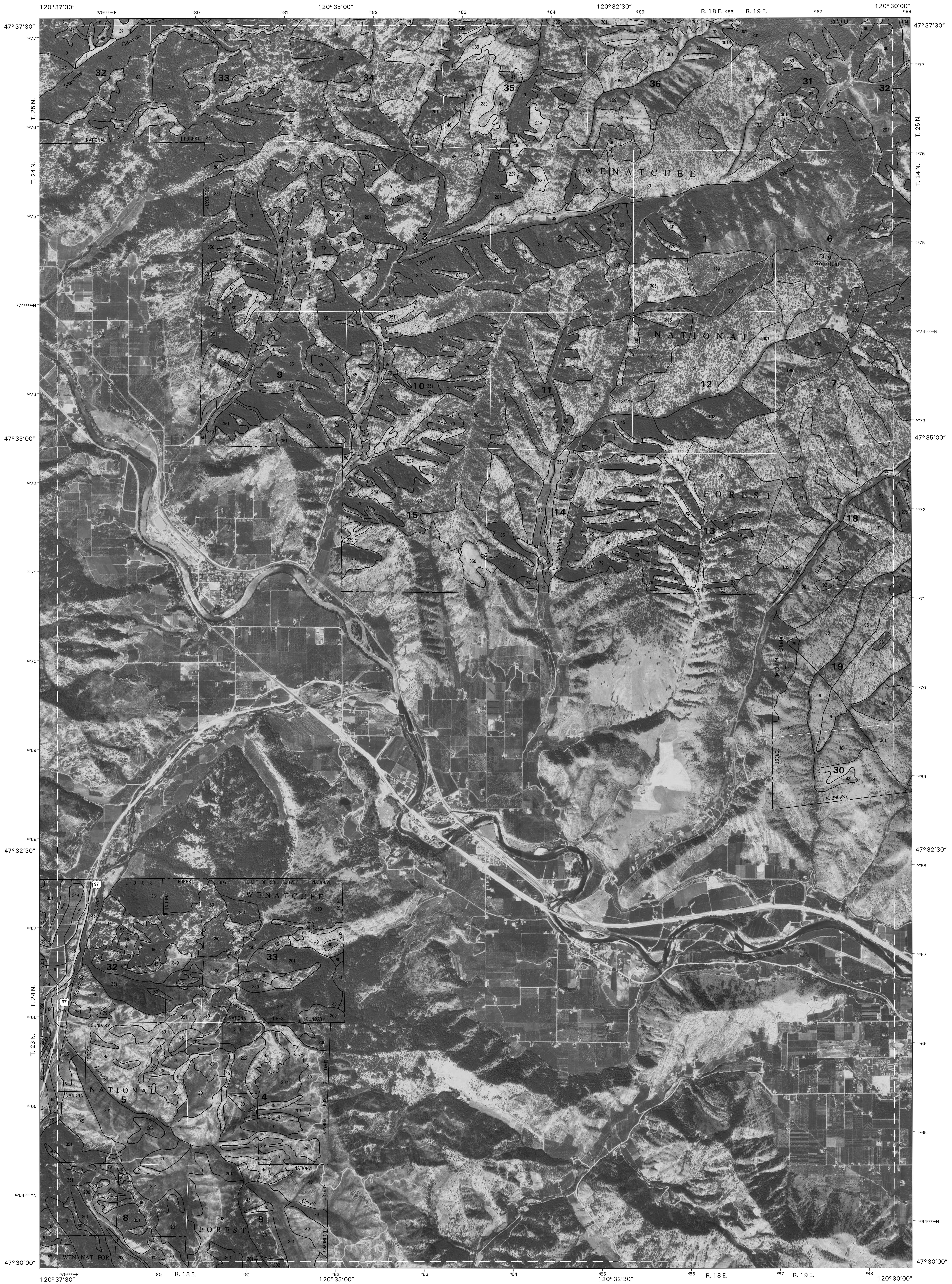

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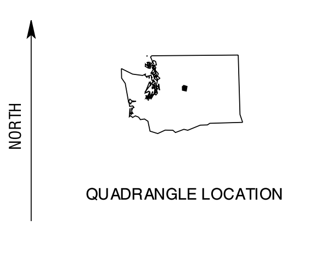

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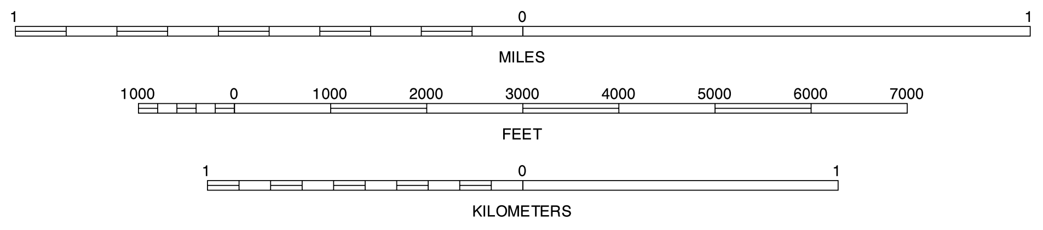

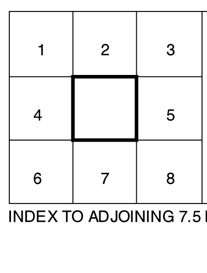

1 WINTON (SHEET 51)
2 VAN CREEK (SHEET 52)
3 CHUMSTICK MOUNTAIN (SHEET 53)
4 LEAVENWORTH (SHEET 59)
5 CASHMERE (SHEET 61)
6 BLEWETT (SHEET 65)
7 TIPTOP (SHEET 66)
8 MONITOR (SHEET 67)

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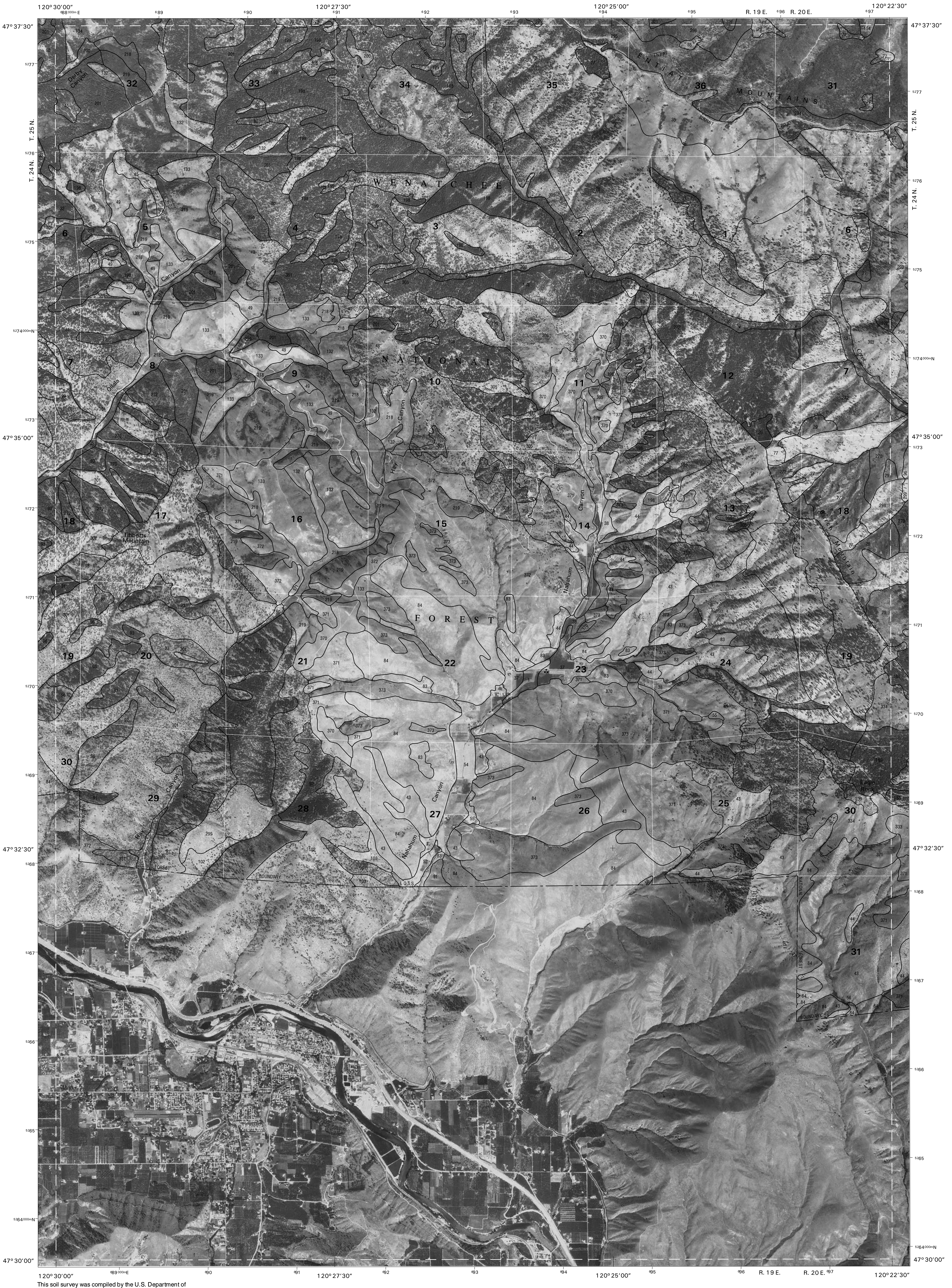
CASHMERE MOUNTAIN AREA, WASHINGTON
CASHMERE QUADRANGLE
SHEET NUMBER 61 OF 70



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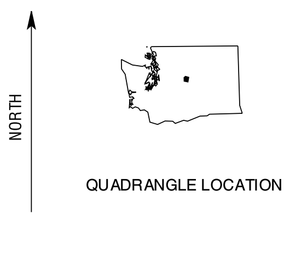

QUADRANGLE LOCATION

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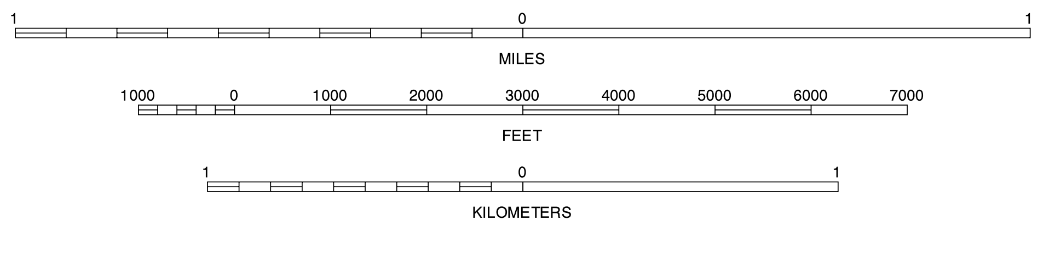

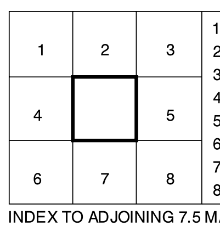

1 VAN CREEK (SHEET 52)
2 CHUMSTICK MOUNTAIN (SHEET 53)
3 ARDENVOIR (SHEET 54)
4 PESHASTIN (SHEET 60)
5 ROCKY REACH DAM (SHEET 62)
6 TIPTOP (SHEET 66)
7 MONITOR (SHEET 67)
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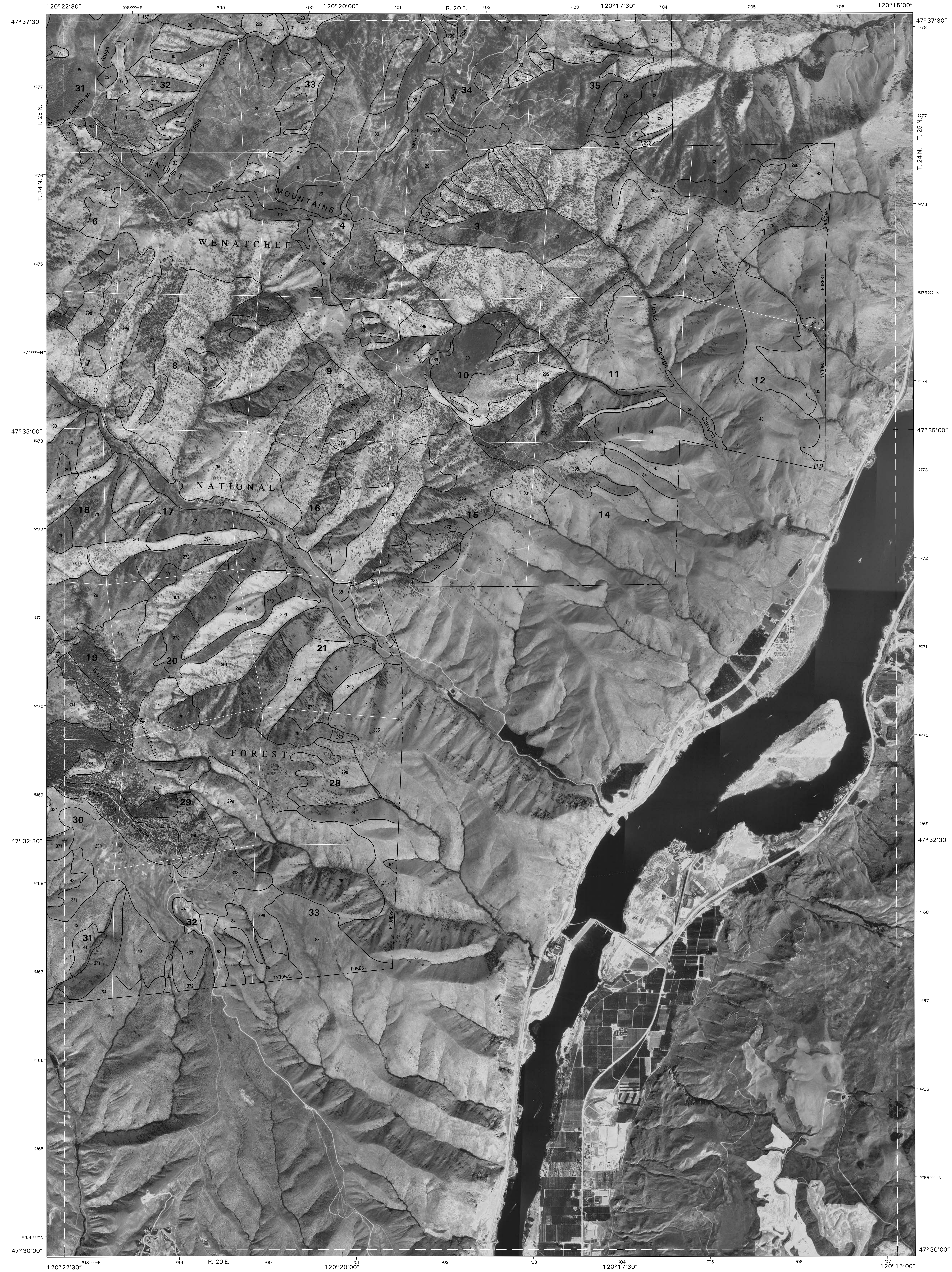
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
ROCKY REACH DAM QUADRANGLE
SHEET NUMBER 62 OF 70



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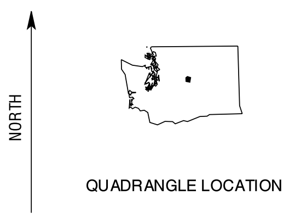

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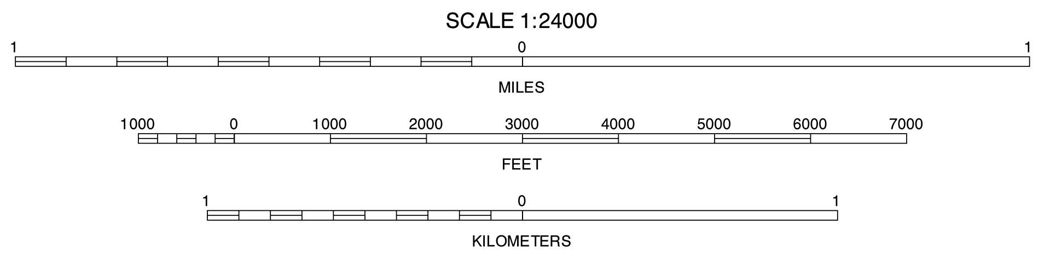

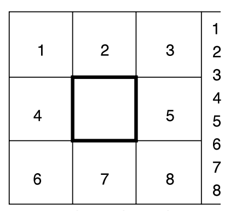

1 CHUMSTICK MOUNTAIN (SHEET 53)
2 ARDENVOIR (SHEET 54)
3 ENTIAT (SHEET 55)
4 CASHMERE (SHEET 61)
5 ORONDO
6 MONITOR (SHEET 67)
7 WENATCHEE
8 ROCK ISLAND

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DEPARTMENT OF AGRICULTURE
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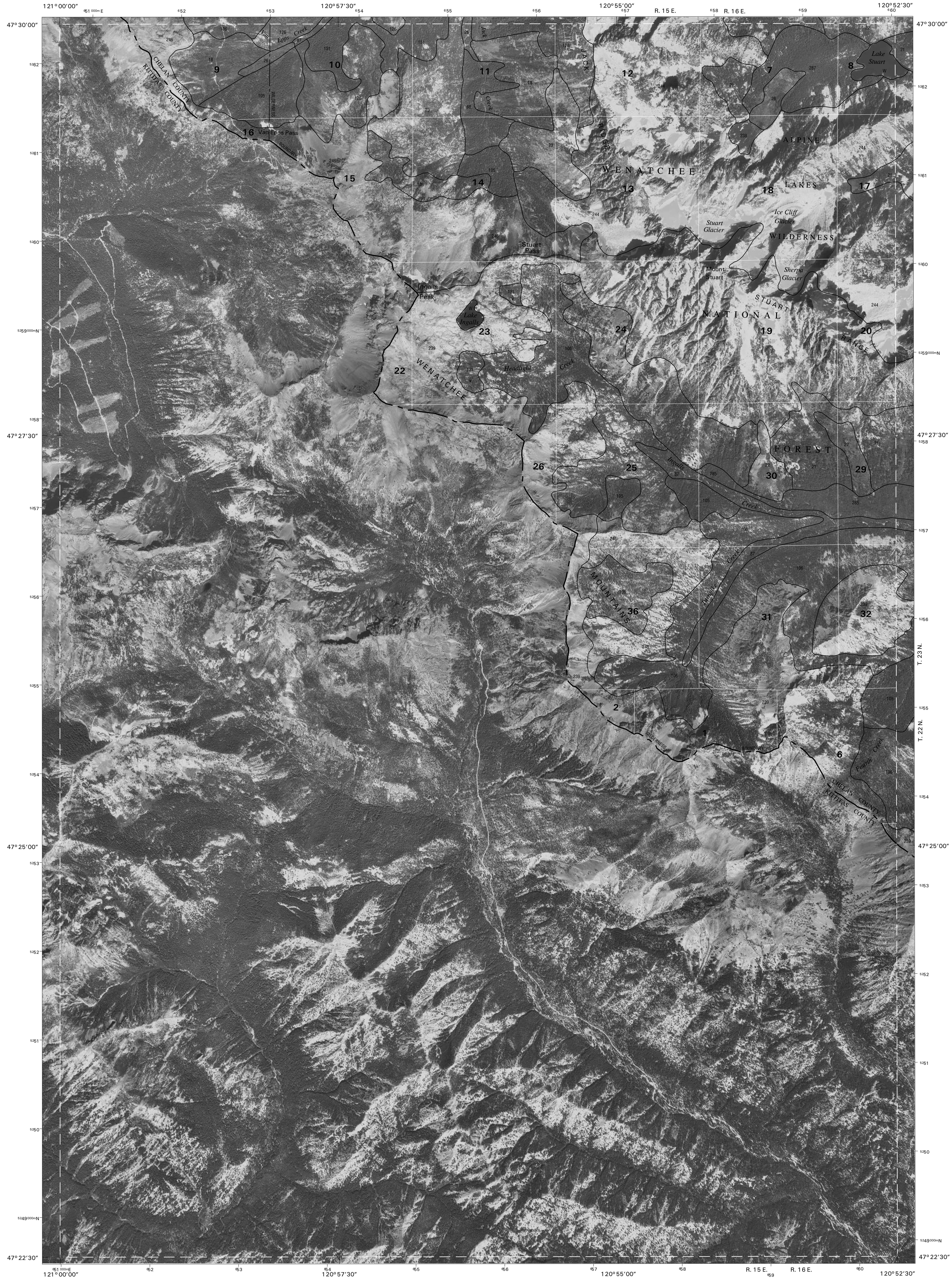
CASHMERE MOUNTAIN AREA, WASHINGTON
MOUNT STUART QUADRANGLE
SHEET NUMBER 63 OF 70



121°00'00"
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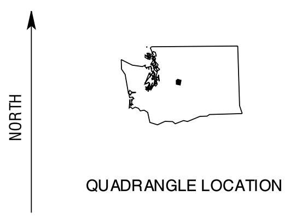

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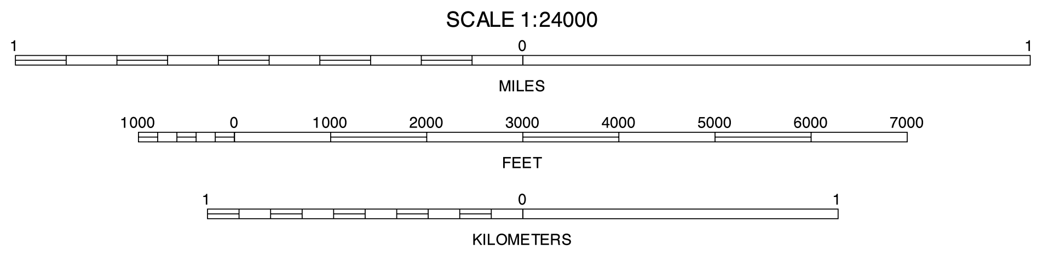

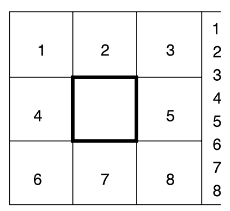

1 THE CRADLE (SHEET 56)
2 JACK RIDGE (SHEET 57)
3 CASHMERE MOUNTAIN (SHEET 58)
4 DAVIS PEAK
5 ENCHANTMENT LAKES (SHEET 64)
6 CLE ELUM LAKE
7 TEANAWAY BUTTE
8 RED TOP MOUNTAIN

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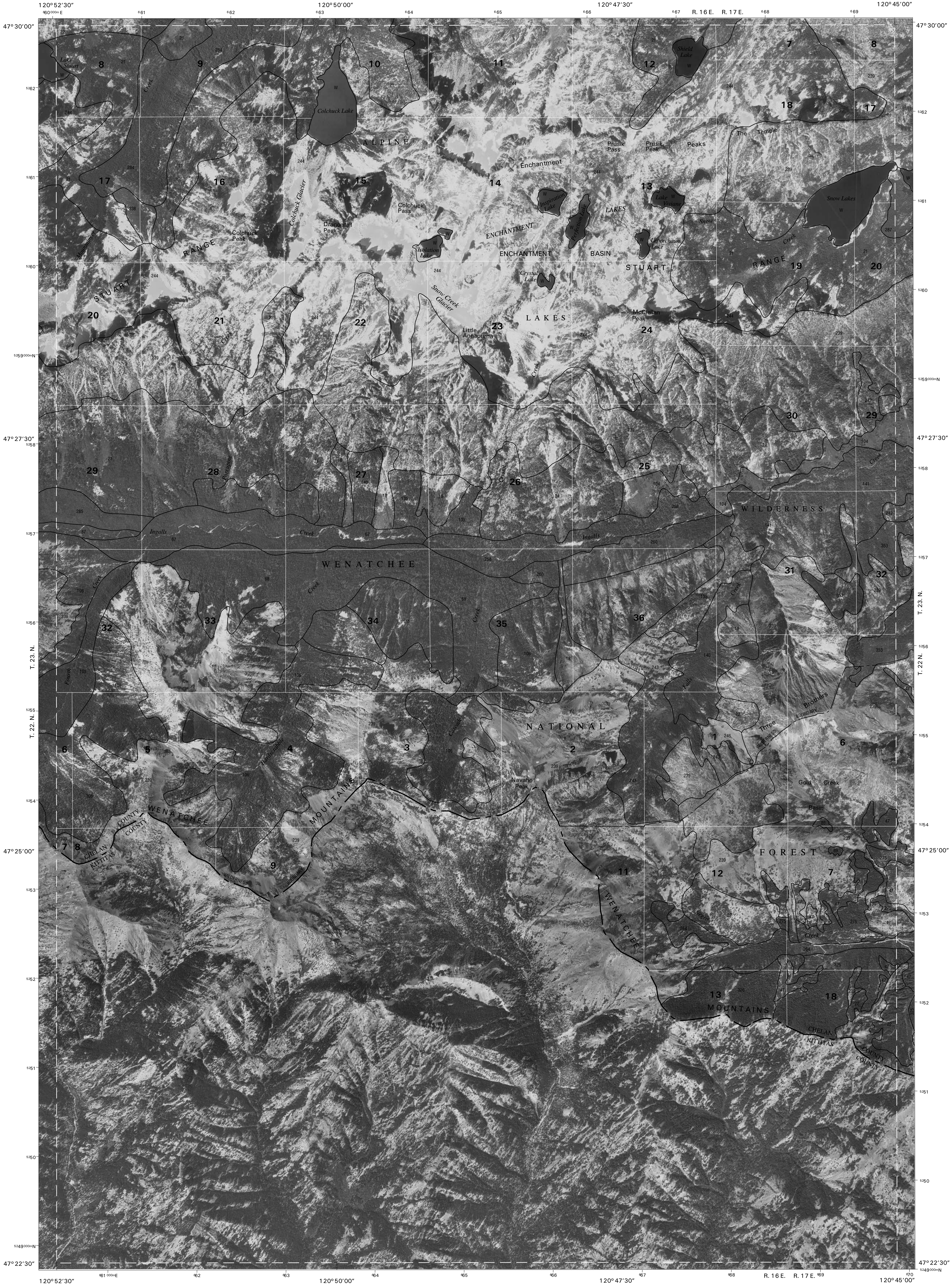
CASHMERE MOUNTAIN AREA, WASHINGTON
ENCHANTMENT LAKES QUADRANGLE
SHEET NUMBER 64 OF 70



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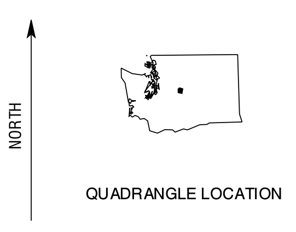
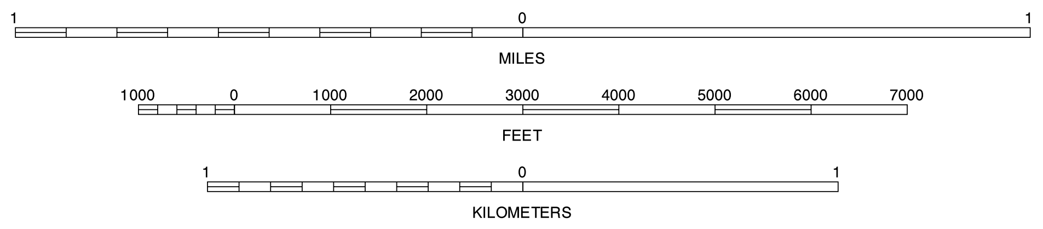
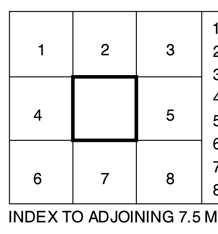


QUADRANGLE LOCATION

SCALE 1:24000





1 JACK RIDGE (SHEET 57)
2 CASHMERE MOUNTAIN (SHEET 58)
3 LEAVENWORTH (SHEET 59)
4 MOUNT STUART (SHEET 63)
5 BLEWETT (SHEET 65)
6 TEANAWAY BUTTE
7 RED TOP MOUNTAIN
8 LIBERTY (SHEET 68)

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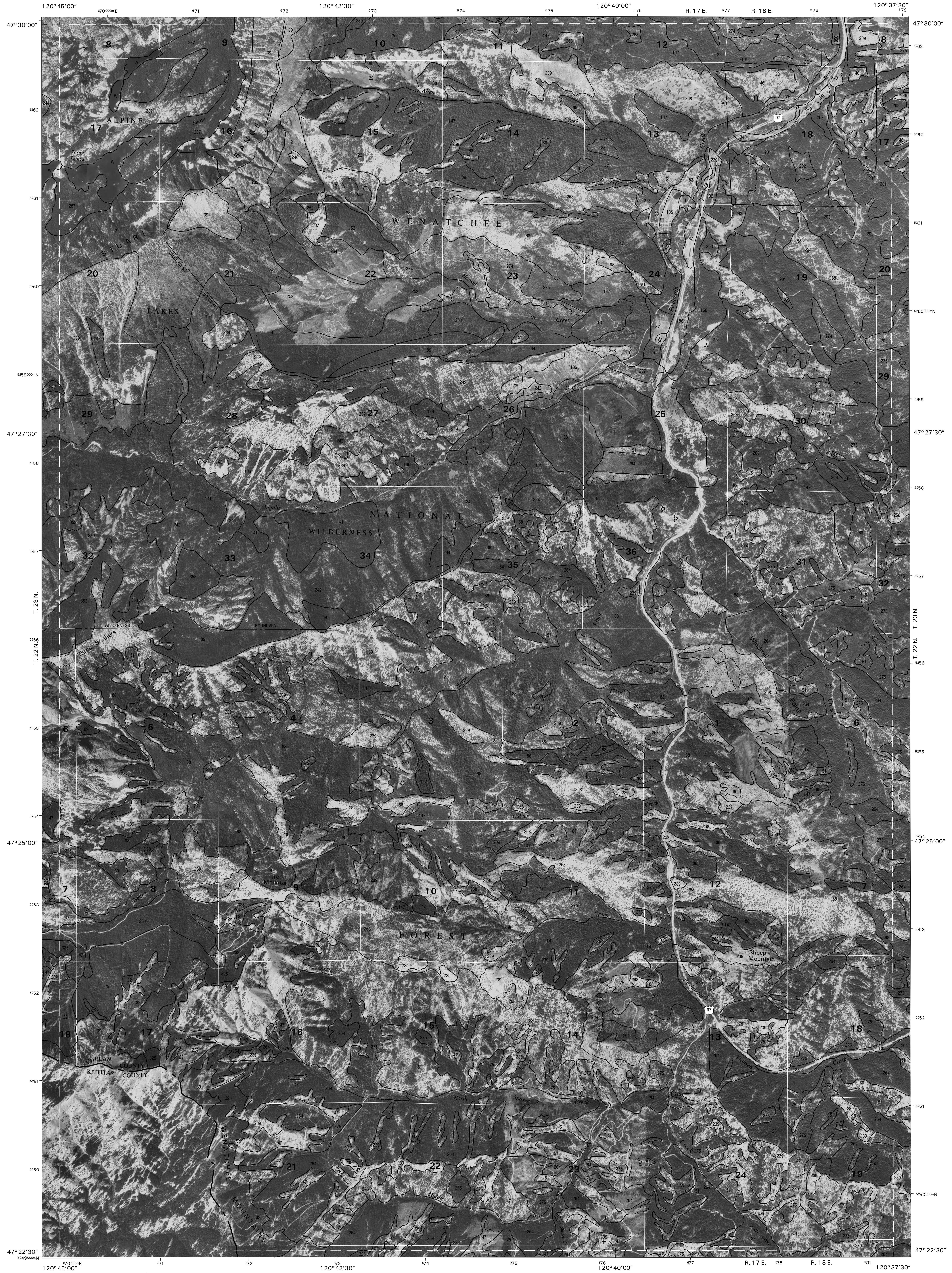
CASHMERE MOUNTAIN AREA, WASHINGTON
BLEWETT QUADRANGLE
SHEET NUMBER 65 OF 70



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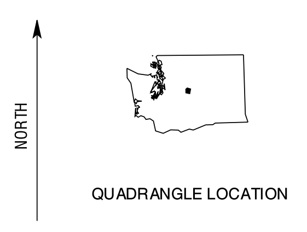

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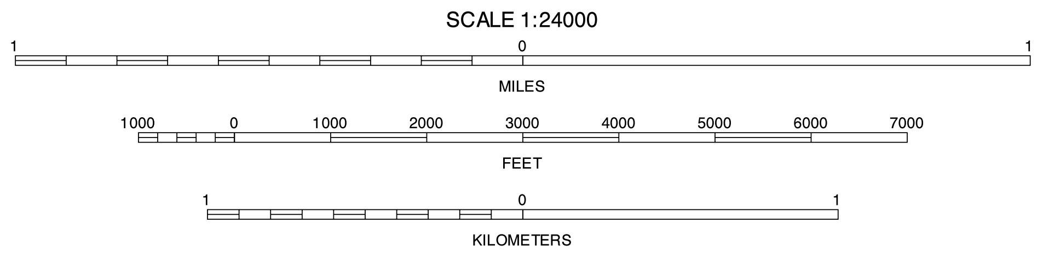

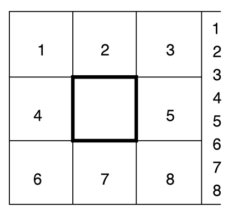

1 CASHMERE MOUNTAIN (SHEET 58)
2 LEAVENWORTH (SHEET 59)
3 PESHASTIN (SHEET 60)
4 ENCHANTMENT LAKES (SHEET 64)
5 TIPTOP (SHEET 66)
6 RED TOP MOUNTAIN
7 LIBERTY (SHEET 68)
8 BLEWETT PASS (SHEET 69)

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BLEWETT, WASHINGTON
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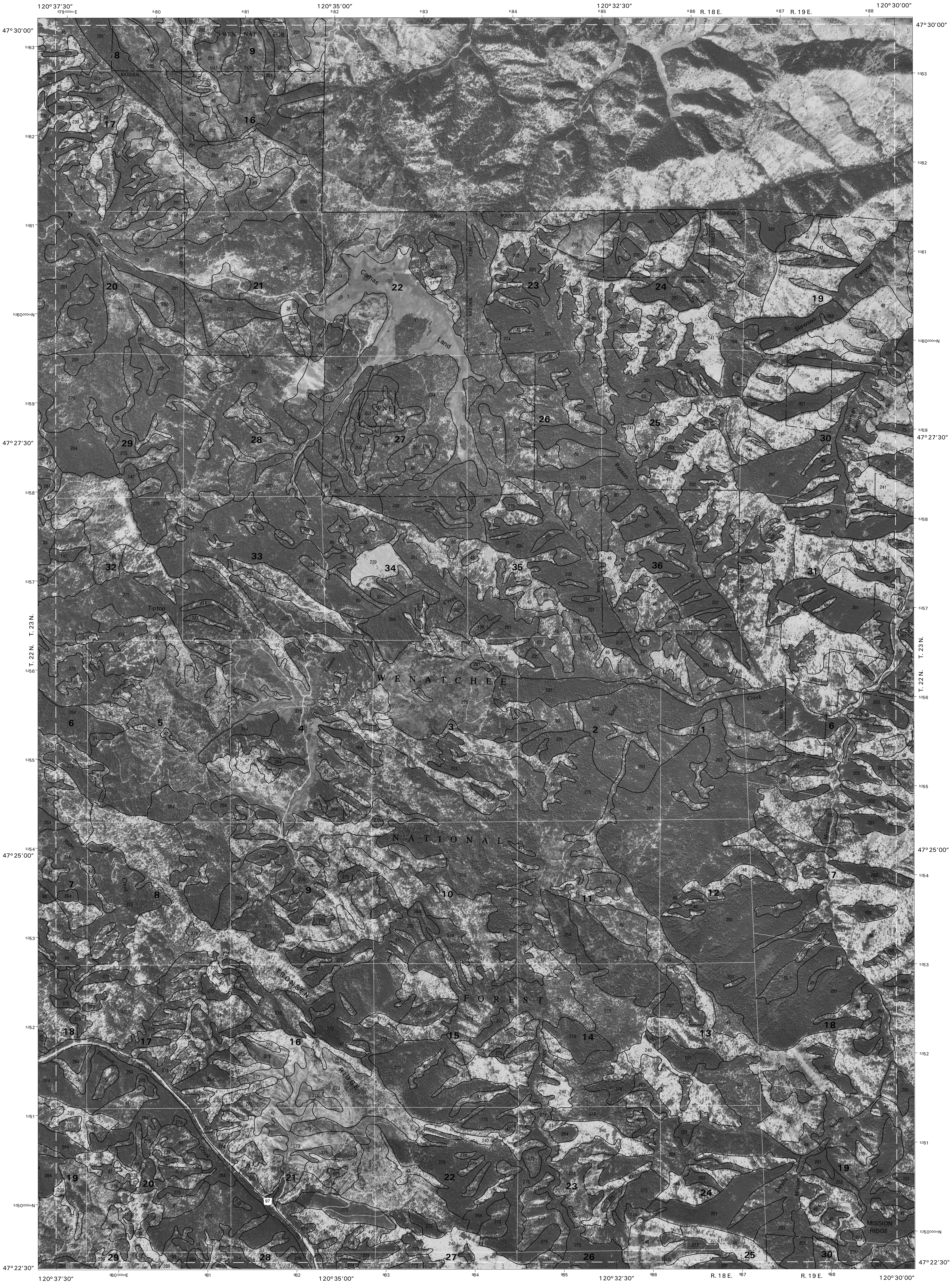
SHEET NUMBER 65 OF 70

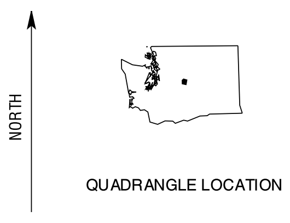
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CASHMERE MOUNTAIN AREA, WASHINGTON
TIPTOP QUADRANGLE
SHEET NUMBER 66 OF 70



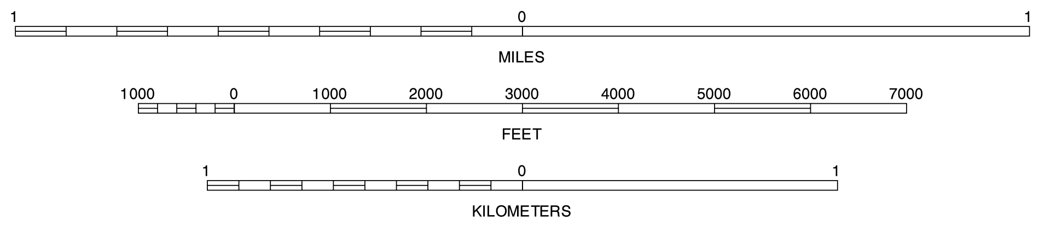
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1998 aerial photography. Culture was acquired from the USGS. Public land survey system (PLSS) was acquired from Washington Department of Natural Resources. National forest and wilderness boundaries were acquired from the U.S.Department of Agriculture, Forest Service. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000



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1 LEAVENWORTH (SHEET 59)
2 PESHASTIN (SHEET 60)
3 CASHMERE (SHEET 61)
4 BLEWETT (SHEET 65)
5 MONITOR (SHEET 67)
6 LIBERTY (SHEET 68)
7 BLEWETT PASS (SHEET 69)
8 MISSION PEAK (SHEET 70)

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UNITED STATES
DEPARTMENT OF AGRICULTURE
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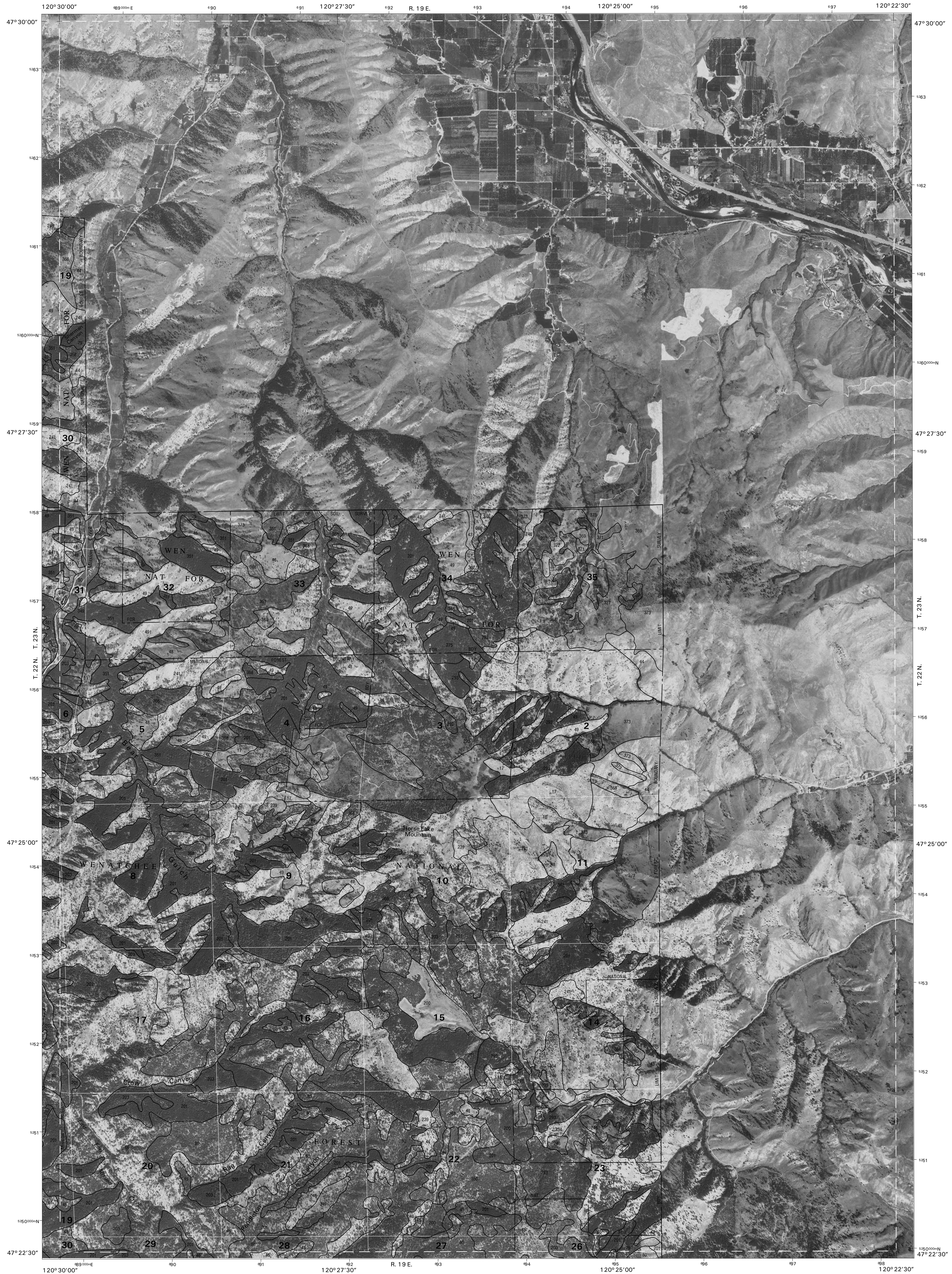
CASHMERE MOUNTAIN AREA, WASHINGTON
MONITOR QUADRANGLE
SHEET NUMBER 67 OF 70



120° 30′00″

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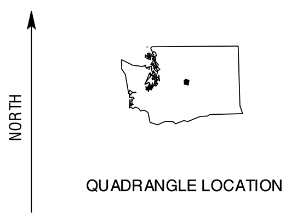
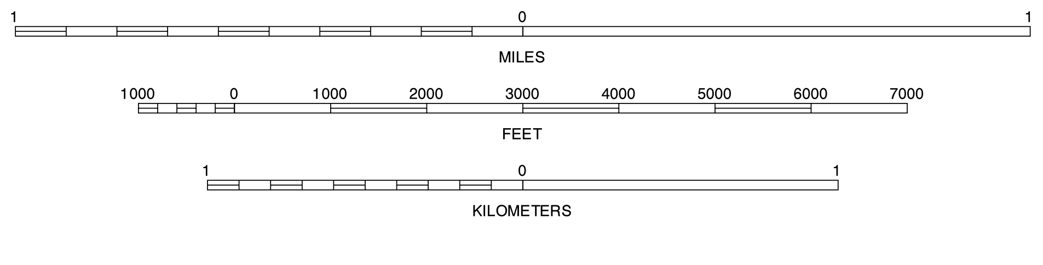
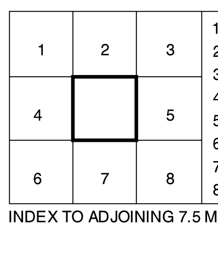
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000





1 PESHASTIN (SHEET 60)
2 CASHMERE (SHEET 61)
3 ROCKY REACH DAM (SHEET 62)
4 TIPTOP (SHEET 66)
5 WENATCHEE
6 BLEWETT PASS (SHEET 69)
7 MISSION PEAK (SHEET 70)
8 WENATCHEE HEIGHTS

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UNITED STATES
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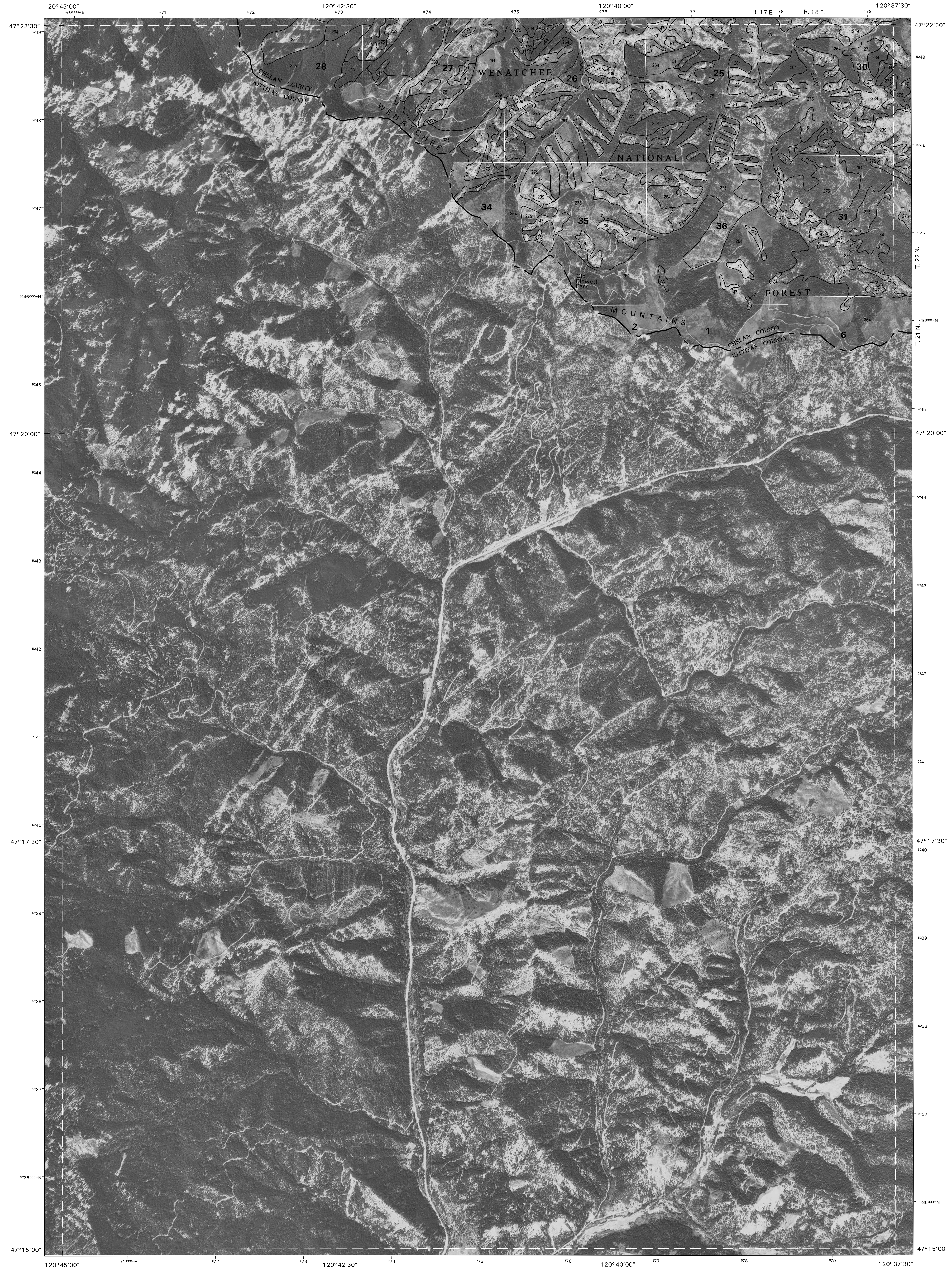
CASHMERE MOUNTAIN AREA, WASHINGTON
LIBERTY QUADRANGLE
SHEET NUMBER 68 OF 70



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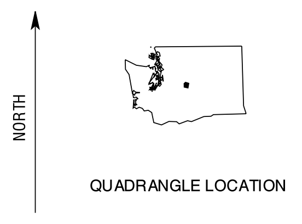
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



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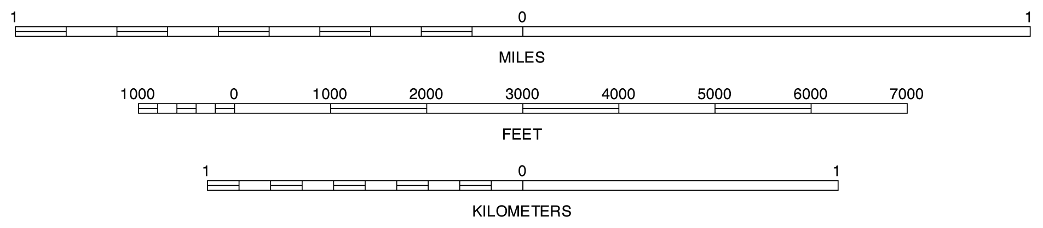

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1 ENCHANTMENT LAKES (SHEET 64)
2 BLEWETT (SHEET 65)
3 TIPTOP (SHEET 66)
4 RED TOP MOUNTAIN
5 BLEWETT PASS (SHEET 69)
6 TEANAWAY
7 SWAUK PRAIRIE
8 REECER CANYON

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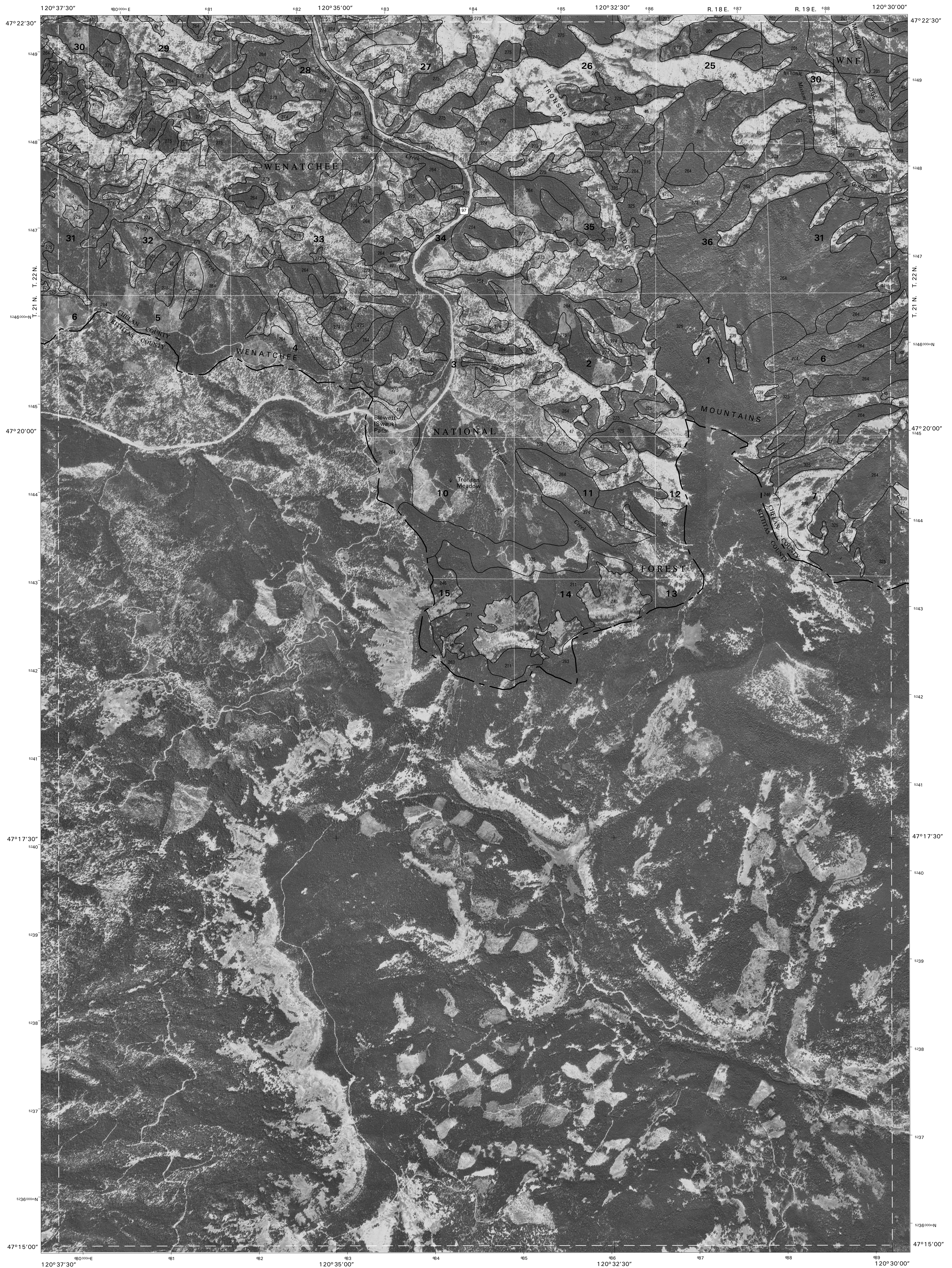
CASHMERE MOUNTAIN AREA, WASHINGTON
BLEWETT PASS QUADRANGLE
SHEET NUMBER 69 OF 70



120°37′30″
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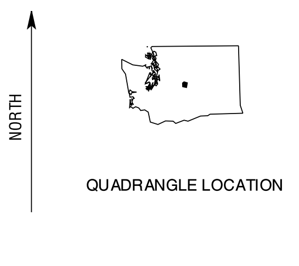
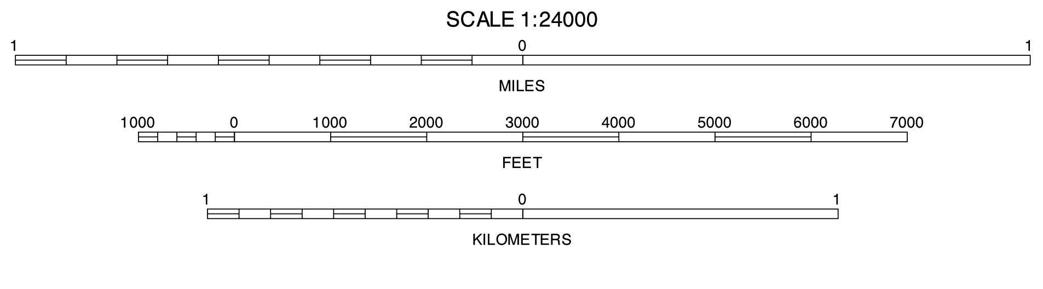
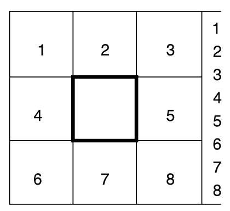
North American Datum of 1983 (NAD83). GRS - 80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zones 10 and 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUADRANGLE LOCATION





1 BLEWETT (SHEET 65)
2 TIPTOP (SHEET 66)
3 MONITOR (SHEET 67)
4 LIBERTY (SHEET 68)
5 MISSION PEAK (SHEET 70)
6 SWAUK PRAIRIE
7 REECER CANYON
8 NANEUM CANYON

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DEPARTMENT OF AGRICULTURE
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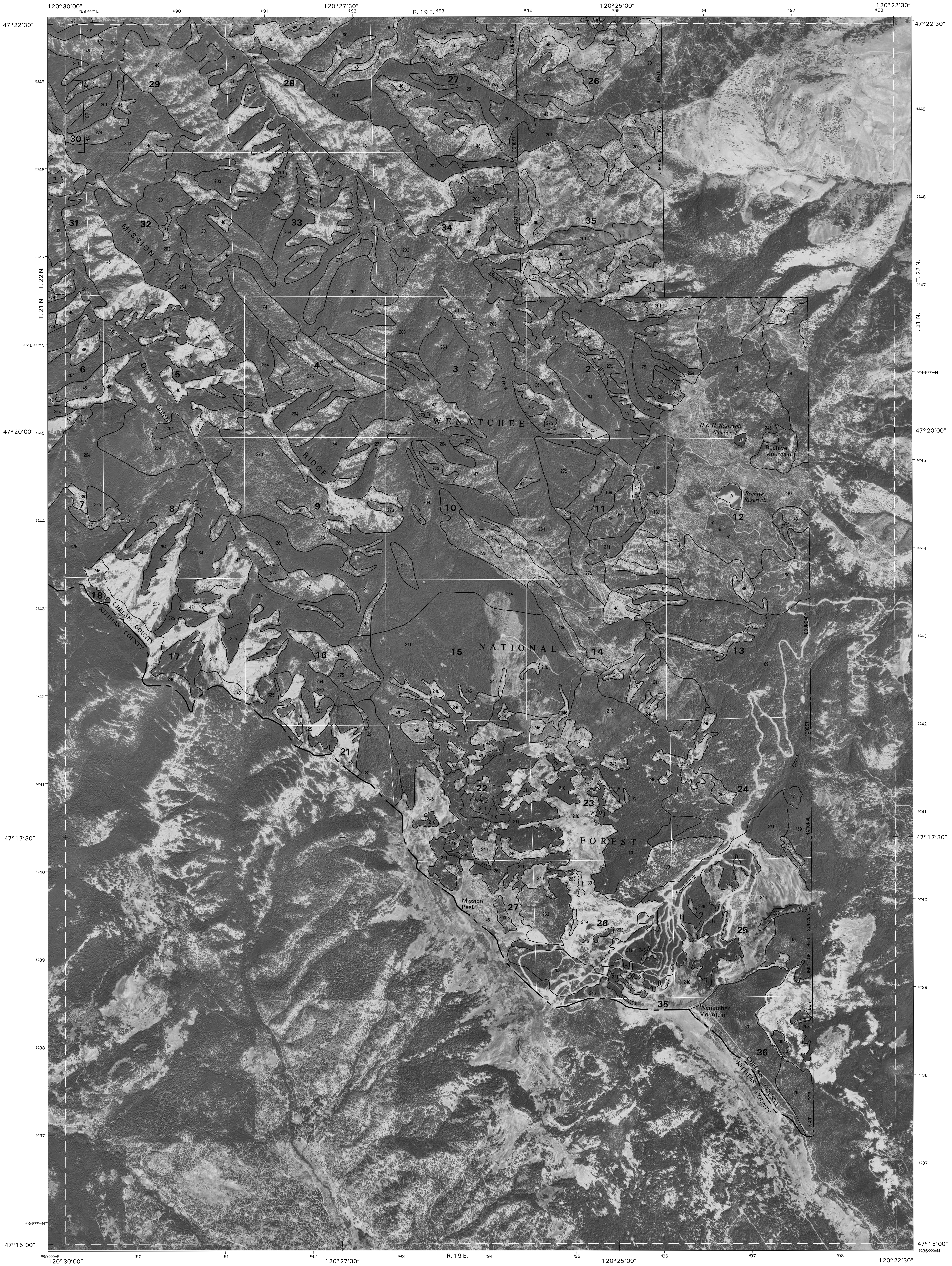
CASHMERE MOUNTAIN AREA, WASHINGTON
MISSION PEAK QUADRANGLE
SHEET NUMBER 70 OF 70



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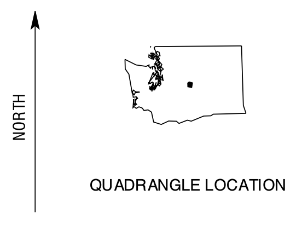
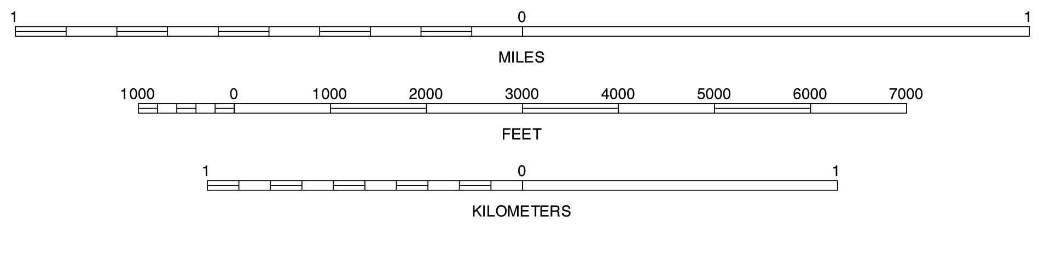


QUADRANGLE LOCATION

SCALE 1:24000



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1 TIPTOP (SHEET 66)
2 MONITOR (SHEET 67)
3 WENATCHEE
4 BLEWETT PASS (SHEET 69)
5 WENATCHEE HEIGHTS
6 REECER CANYON
7 NANEUM CANYON
8 COLOCKUM PASS

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